



CITY OF BRADFORD.

ANNUAL REPORT
OF THE
MEDICAL OFFICER

1914

BRADFORD :
WM. BYLES AND SONS LTD., PRINTERS, PICCADILLY.



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WM. BYLES & SONS LIMITED, PRINTERS, PICCADILLY.

STATISTICAL SUMMARY.

Situation: Latitude 53°4' N.; Longitude 1°7' W.

Elevation: 251—1207 feet.

Area of City: 22,880 acres, or 35½ sq. miles.

Density of Population: 12·7 persons per acre.

Number of Inhabited Houses: 72,100.

Population: 288,458 (Census 1911).

290,642 (estimated to the middle of 1914).

Birth-rate: 19·64 per 1000.

Death-rate: Recorded, 15·76 per 1000.

Standardised, 16·62 per 1000.

Zymotic, 1·22 per 1000.

Phthisis, 1·27 per 1000.

Infantile Mortality, 122 per 1000 births.

Total Rainfall: 34·69 inches.

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HEALTH COMMITTEE.

THE RIGHT HONOURABLE THE LORD MAYOR.

MR. COUNCILLOR E. J. SMITH, Chairman.

MR. COUNCILLOR H. T. PULLAN, Deputy Chairman.

MR. ALDERMAN HORSFALL,	MR. ALDERMAN A. PICKLES,
„ R. JOHNSON,	„ A. PRIESTMAN,
„ A. PEEL,	„ H. M. TROTTER,
and MR. ALDERMAN W. WARBURTON.	

MR. COUNCILLOR J. DRAKE,	MR. COUNCILLOR L. J. PARKER,
„ J. HARRISON,	„ E. PRIESTLEY,
„ O. HOLDEN,	„ J. STRINGER,
„ S. KAY,	„ H. H. TETLEY,
„ J. MOSER,	„ D. WALKER,
„ J. H. PALIN,	„ H. WILMAN.

HEALTH SUB-COMMITTEES.

Accounts Committee :—

THE LORD MAYOR.

ALDERMAN PEEL.

COUNCILLORS HARRISON, MOSER, PULLAN, SMITH, STRINGER, TETLEY,
D. WALKER, and WILMAN.

Housing Committee :—

THE LORD MAYOR.

ALDERMEN—HORSFALL, JOHNSON, PEEL, PICKLES, PRIESTMAN,
TROTTER, and Warburton.

COUNCILLORS DRAKE, HOLDEN, KAY, MOSER, PALIN, PARKER, PRIESTLEY,
PULLAN, SMITH, STRINGER, TETLEY, and D. WALKER.

Nuisances Committee :—

THE LORD MAYOR.

ALDERMEN HORSFALL, JOHNSON, PICKLES, PRIESTMAN, TROTTER,
and Warburton.

COUNCILLORS DRAKE, HARRISON, HOLDEN, KAY, PALIN, PARKER,
PRIESTLEY, PULLAN, and SMITH.

MEDICAL OFFICER'S DEPARTMENT,

TOWN HALL, BRADFORD,

1st July, 1915.

To the Chairman and Members of the Health Committee.

GENTLEMEN,

I have the honour to present to you the Annual Report of the Health of the City for the year 1914.

The Birth-rate for the year was 19·64 per 1,000 of the population, being an increase of 0·02 per 1,000 from that of 1913. The Birth-rate in Bradford is very low compared with that in other towns, although it has shown some tendency to rise during the last three years.

The Death-rate was 15·76 per 1,000, being an increase of 0·65 over that of the previous year. The Zymotic Death-rate was 1·22 per 1,000, an increase of 0·12, and the Infantile Mortality Rate was 122 per 1,000 children born, a decrease of 6 per 1,000 from the rate of 1913. The Death-rate from pulmonary tuberculosis was 1·27, the rate in 1913 was 1·04 per 1,000.

It gives me great pleasure to report the excellent work done by all the members of the staff.

I have in conclusion to acknowledge with thanks the kindness and assistance which I have at all times received from the Chairman and Members of the Committee.

I am, Mr. Chairman and Gentlemen,

Your obedient servant,

JOHN J. BUCHAN,
Medical Officer of Health.

I.—VITAL STATISTICS.

(A) POPULATION.

The estimated population of the City at the middle of 1914 was 290,642. The population at the census of 1911 was 288,548, and that of 1901, 279,767.

The distribution and density of the population in the different wards of the City is seen in the following table :—

DISTRIBUTION AND DENSITY OF POPULATION.

Wards	Population, Census 1911	Estimated Population, 1914	Area of Wards in Acres	Person per Acre
Allerton	11,698	11,922	2864	4·2
Bolton	8,912	8,988	1001	9·0
Bradford Moor ..	23,037	23,465	680	34·6
East	16,629	16,694	385	43·5
East Bowling ..	17,771	17,888	565	31·8
Eccleshill	10,471	10,686	1221	8·8
Exchange	3,101	2,939	118	25·0
Great Horton ..	23,415	23,817	1289	18·5
Heaton	17,734	17,995	883	20·4
Idle	7,520	7,734	1693	4·5
Listerhills	16,142	15,850	321	49·5
Little Horton ..	16,389	16,387	425	38·7
Manningham	22,941	23,294	449	52·0
North	12,158	12,120	353	34·4
North Bierley East ..	12,013	12,042	2419	5·0
North Bierley West ..	10,109	10,347	1836	5·7
South	14,366	14,279	303	47·2
Thornton	5,544	5,550	2251	2·5
Tong	7,365	7,525	2659	2·8
West	10,035	9,846	162	60·9
West Bowling ..	21,108	21,274	1003	21·3
City	288,458	290,642	22,880	12·7

The average density of population varies therefore from 2·5 persons per acre in Thornton Ward to 60·9 in the West Ward. The average density of population in such a city as Bradford where a large part of the land is not built upon does not properly express the crowding of the people on the land.

From the estimate of population in the wards of the City it will be seen that there is a decrease of population in the Exchange, Lister-hills, North, South, and West Wards. Generally, therefore, the population in the older and central parts of the City is decreasing, while in the surrounding newer parts it is increasing.

There is a comparative shortage of young lives in Bradford, as only 8·3 per cent. of the population is under five years, and only 25·2 per cent. under fifteen years, as compared with 10·7 per cent. under five, and 30·7 under fifteen years in England and Wales generally.

In Bradford 46·3 per cent. of the population are males and 53·7 per cent. females, the corresponding figures in England and Wales are 48·4 per cent. males and 51·6 females. The excess of females in Bradford is therefore higher than in the country generally, and it is particularly marked at the age periods after fifteen.

At the census of 1911 there were 155,678 persons unmarried ; the number of married persons at that time was 114,368, this being 39·6 per cent. of the total population, as compared with 36·4 per cent. in England and Wales.

POPULATION ARRANGED ACCORDING TO AGE AND SEX DISTRIBUTION.

	Males		Females	
Age Period	1911	1914	1911	1914
Under 1	2490	2508	2388	2405
1— 2	2325	2342	2297	2314
2— 3	2474	2495	2416	2433
3— 4	2508	2526	2339	2356
4— 5	2426	2443	2356	2373
5—10	11701	11789	12095	12188
10—15	12254	12346	12709	12807
15—25	24087	24270	29103	29324
25—35	23432	23610	28415	28631
35—45	20185	20339	23330	23506
45—55	14997	15111	17571	17705
55—65	9189	9259	11587	11674
65	5402	5443	8382	8445
All ages	133470	134481	154988	156161

The following statement shows the condition as to marriage in each sex per cent. of persons aged twenty years and upwards :—

	Males per cent.			Females per cent.		
	Unmarried	Married	Widowed	Unmarried	Married	Widowed
Bradford ..	27·3	66·8	5·9	31·7	55·4	12·9
England and Wales ..	30·7	63·3	6·0	30·2	57·9	11·9

It will therefore be seen that a larger percentage of males are married in Bradford than in England and Wales, but a smaller number of females ; there is however a larger proportion of widows in Bradford.

The number of inhabited houses in Bradford at the middle of 1914 is estimated at 72,100, which gives an inhabited house rate of 4·03 persons per house.

(B) BIRTHS.

The number of births registered in the 52 weeks ending January 2nd, 1915, was 5,709, of which 2,885 were males and 2,824 females. This gives a birth-rate for the year of 19·64 per 1,000, an increase of 0·02 per 1,000 from that recorded last year.

BIRTH-RATE IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bradford	21·3	20·8	20·1	20·9	19·1	19·0	19·0	19·2	19·6	19·6
97 Great	28·2	27·9	27·0	27·0	25·7	25·0	25·6	24·9	25·1	25·0
Towns										
England &	27·2	27·0	26·3	26·5	25·6	24·8	24·4	23·8	23·9	23·8
Wales										

The birth-rate in Bradford is very low compared with that in most other towns; it has however in the last three years shown some tendency to rise. The fall in the Bradford birth-rate is shown on the chart following page 24 and in Table A, page 24.

Locally the birth-rate varied from 14·11 in North Bierley West Ward to 27·84 in the South Ward.

The births in each ward in the four quarters of 1914 are seen on the table on the following page.

BIRTHS IN WARDS IN EACH QUARTER OF 1914.

Wards	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total.
Allerton	44	50	38	37	169
Bolton	26	42	41	27	136
Bradford Moor ..	121	121	130	117	489
East.. ..	74	81	80	99	334
East Bowling ..	96	110	107	99	412
Eccleshill	46	54	54	49	203
Exchange	14	14	20	19	67
Great Horton ..	88	96	102	78	364
Heaton	74	75	92	64	305
Idle	35	39	41	45	160
Listerhills	77	86	78	66	307
Little Horton ..	79	93	98	92	362
Manningham.. ..	118	121	131	123	493
North	73	98	68	69	308
North Bierley East ..	53	65	41	34	193
North Bierley West ..	41	40	43	22	146
South.. ..	95	99	99	105	398
Thornton	27	19	21	14	81
Tong	34	39	49	39	161
West	72	61	59	48	240
West Bowling ..	100	97	103	74	374
City	1387	1500	1495	1320	*5709

* Seven of these births were born outside the district, the home address in Bradford not being obtainable.

Illegitimacy. Of the 5,709 births registered during 1914, 342 or 6.0 per cent. were illegitimate. This rate is above the average of recent years.

ILLEGITIMATE BIRTHS.

	1907	1908	1909	1910	1911	1912	1913	1914
Number ..	249	289	278	300	260	293	311	342
Percentage to Total Births ..	4.3	4.8	5.0	5.5	4.7	5.2	5.4	6.0

(C) DEATHS.

The total number of deaths occurring in Bradford in 1914 was 4,490, but after adding those deaths of Bradford persons occurring outside the city and deducting those occurring in the city of persons resident outside, the number becomes 4,580. The death-rate corrected for public institutions is therefore 15.76.

DEATH-RATE IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bradford ..	15.3	16.2	14.7	15.7	14.6	14.3	15.0	14.5	15.1	15.8
97 Great Towns ..	15.7	15.9	15.4	14.9	15.6	14.3	14.0	14.6	14.7	14.7
England & Wales ..	15.2	15.4	15.0	14.7	14.5	13.4	14.6	13.3	13.4	14.0

The death-rate for 1914 is therefore 0.7 per 1,000 above that of the previous year. The death-rates for the past thirty years is seen on Table A, page 24. The average death-rate per 1,000 for five-yearly periods from 1870 shows that the rate has been falling continuously from 25.9 to about 15 per 1,000.

AVERAGE QUINQUENNIAL DEATH-RATES FROM 1871.

1871-75 .. 25'9	1891-95 .. 19'7	1911 .. 15'0
1876-80 .. 22'3	1896-1900 .. 17'9	1912 .. 14'5
1881-85 .. 19'9	1901-05 .. 16'3	1913 .. 15'1
1886-90 .. 20'9	1906-10 .. 15'1	1914 .. 15'7

In making a comparison between death-rates it is necessary to allow for differences in the age and sex distribution of the population. This is done by the application of a factor known as the "standardising factor" which corrects the death rate to the international standard of age and sex distribution—that of England and Wales at the census of 1901. The standardising factor is given for Bradford as 1'0550, so that the standardised death-rate for Bradford in 1914 becomes 16'6 as compared with 13'7, the standardised death rate for England and Wales for the same year.

The deaths occurring in each Ward for each quarter of 1914 is seen on the Table on the following page. The birth and death-rates and the natural increase per 1,000 living in each Ward is seen in the Table on page 18. It will be seen that the death rate has varied from 9.23 in the Allerton Ward, to 27'48 in the West Ward, and that the greatest natural increase of 8'51 per 1,000 has occurred in Idle Ward, while in Exchange Ward, North Bierley East, North Bierley West, and West Wards, there has been a natural decrease of 1'35, 1'06, 3'28, and 3'13 respectively.

The death-rate among the male population has been 17'4 and among the female population 14'3 per 1,000.

The death-rate in Bradford compared with England and Wales is shown on the chart following, page 24.

DEATHS IN WARDS IN EACH QUARTER OF 1914.

Wards	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1914
Allerton	26	30	30	24	110
Bolton	32	22	29	30	113
Bradford Moor ..	81	90	70	92	333
East	67	53	48	49	217
East Bowling ..	89	87	67	74	317
Eccleshill	46	44	26	40	156
Exchange	15	10	23	23	71
Great Horton ..	76	82	51	69	278
Heaton	59	56	52	55	222
Idle	25	26	24	19	94
Listerhills	91	60	52	55	258
Little Horton ..	92	75	51	79	297
Manningham	92	88	72	90	342
North	95	71	58	50	274
North Bierley East ..	64	52	40	50	206
North Bierley West ..	39	56	44	41	180
South	82	75	66	69	291
Thornton	19	22	18	11	70
Tong	24	34	31	34	123
West	68	81	48	74	271
West Bowling ..	88	83	67	81	319
City	1276	1209	977	1118	4580

In the West Riding Lunatic Asylums and other Institutions outside the district there were 196 deaths of persons ordinarily resident in Bradford, but in reference to 38 of them no address was returned, consequently it was impossible to refer them to any particular municipal ward.

NATURAL INCREASE OF POPULATION IN EACH WARD.

Wards.	Birth Rate per 1000	Death Rate per 1000	Natural increase per 1000 living
Allerton	14·17	9·23	4·94
Bolton	15·13	12·57	2·56
Bradford Moor	20·82	14·19	6·63
East	19·99	13·00	6·99
East Bowling	23·01	17·71	5·30
Eccleshill	18·98	14·60	4·38
Exchange	22·77	24·12	—1·35
Great Horton	15·28	11·68	3·60
Heaton	16·94	12·34	4·60
Idle	20·67	12·16	8·51
Listerhills	19·35	16·27	3·08
Little Horton	22·07	18·11	3·96
Manningham	21·19	14·68	6·51
North	25·38	22·58	2·80
North Bierley East	16·04	17·10	—1·06
North Bierley West	14·11	17·39	—3·28
South	27·84	20·36	7·48
Thornton	14·59	12·61	1·98
Tong	21·37	16·34	5·03
West	24·35	27·48	—3·13
West Bowling	17·57	14·99	2·58
City	19·64	15·76	3·88

Mortality at Different Ages. The following Table shows the total deaths in each age group during the past six years.

NUMBER OF DEATHS IN EACH YEAR AT DIFFERENT AGE PERIODS.

Ages	1909	1910	1911	1912	1913	1914
Under 1 year	638	695	765	553	741	693
1— 2 years	147	208	161	136	152	190
2— 5 „	138	158	153	119	105	171
5—15 „	126	124	145	146	133	142
15—25 „	175	165	185	180	163	177
25—45 „	557	525	630	599	584	543
45—65 „	1182	1106	1150	1156	1253	1328
over 65 „	1247	1135	1162	1313	1343	1336

Infantile Mortality. There were 693 deaths of infants under one year of age which gives an infantile mortality rate of 122 per 1,000 births.

INFANTILE MORTALITY IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bradford	144	152	124	143	116	127	140	99	128	122
Great Towns	140	155	127	128	118	115	140	101	117	114
England & Wales	128	133	118	121	109	106	130	95	109	105

A discussion of infantile and child mortality will be found later in this Report.

Mortality between one and sixty-five years. The number of deaths between these ages in 1914 was 2,551, which gives an annual death rate per 1,000 living at these ages of 9·4. The corresponding rates in the Great Towns and England and Wales were 8·6 and 7·8 per 1,000 living.

Mortality over sixty-five years. There were 1,336 deaths of persons aged sixty-five and upwards which gives an annual death-rate per 1,000 living of 96·2. The corresponding rates in the Great Towns and England and Wales for 1914 were 86·1 and 82·5 per 1,000 living.

Deaths in Public Institutions. In 1914, 1,058 deaths of Bradford residents occurred in Public Institutions, or 23·1 per cent. of the total deaths. .

DEATHS IN PUBLIC INSTITUTIONS.

Name of Institution.	1913	1914
Bradford Union Hospital	525	549
North Bierley Union	65	58
Giggleswick Union	2	4
Other Poor Law Institutions	5	2
Menston Asylum	46	49
Wakefield Asylum	1	2
Storthes Hall Asylum	13	21
Scalebor Park Asylum	2	—
Other Asylums	5	1
Royal Infirmary	200	176
Children's Hospital	108	81
Eye and Ear Hospital	9	10
St. Catherine's Home	18	16
Leeds Infirmary	1	—
Leeds Road Hospital	97	69
Bierley Hall Hospital	1	5
City Infants' Hospital	—	3
North Bierley Joint Hospital	4	4
Calverley Joint Hospital	—	1
Eldwick Sanatorium	1	—
Other Institutions	9	7
Total	1112	1058

It will be noted that in 1914, 613 deaths, or 13·4 per cent. of the total deaths occurred in Poor Law Hospitals; 73 deaths or 1·6 per cent. in Lunatic Asylums; 283 deaths, or 6·2 per cent., in Voluntary Hospitals; and 82 deaths, or 1·8 per cent., in Municipal Hospitals.

The age incidence of deaths in Public Institutions is shown in the following Table :—

	Poor Law Hospitals	Lunatic Asylums	Voluntary Hospitals	Municipal Hospitals	Other Institutions	Total	Per cent. of Deaths at each age
Under 1	43	—	43	5	1	92	13·3
1—2	19	—	19	4	—	42	22·1
2—5	16	—	22	12	—	50	29·2
5—15	7	1	26	15	—	49	34·5
15—25	28	3	19	13	1	64	36·2
25—45	96	26	53	22	2	199	36·6
45—65	196	30	76	11	1	314	24·4
65	208	13	25	—	2	248	18·6
Total	613	73	283	82	7	1058	23·1

Certification of Deaths. 4·139 deaths, or 90·4 per cent., were certified by medical practitioners, and 436, or 9·5 per cent., by the coroner after inquest, and 5, or 0·1 per cent., were uncertified. The table on the following page shows the causes of death as found at the inquests held.

SHOWING THE NUMBER OF INQUESTS HELD, AND VERDICTS RETURNED
DURING THE YEAR ENDED 31ST DECEMBER, 1914.

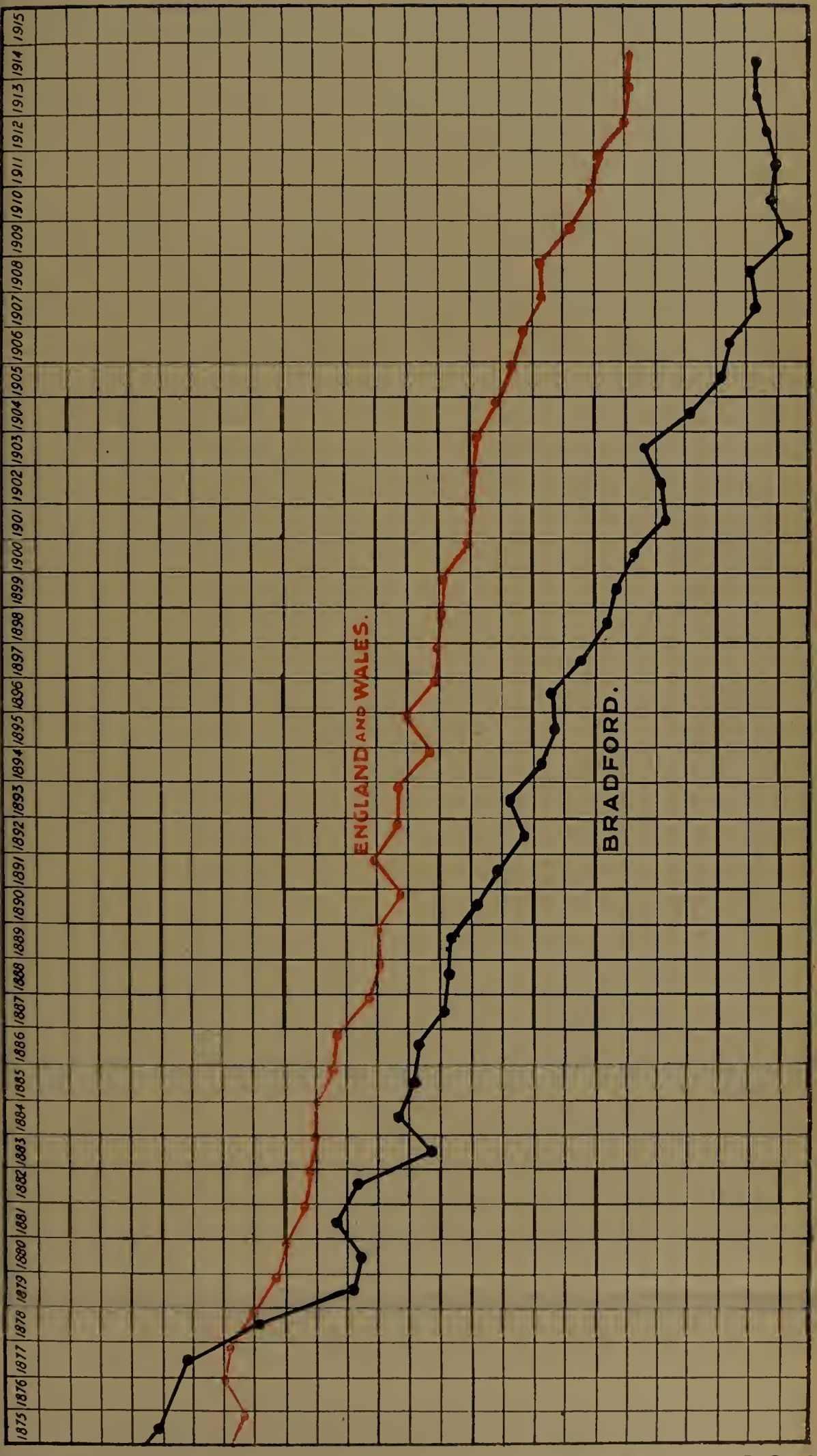
CAUSE OF DEATH.	Wilful Murder.	Manslaughter.	Temporary Insanity.	Intemperance.	Anthrax.	Accidents.	Natural and Un-known Causes.	Open Verdicts.	Total.	Remarks.	
Violence	I	...	...	...	...	...	...	I	2	There were also 56 cases where, after enquiries were made, it was found that Inquests were unnecessary.	
Burns and Scalds	...	...	...	...	...	21	...	...	21		
Railway	...	...	...	...	...	2	...	I	3		
Motor Vehicles	...	...	...	...	...	10	...	...	10		
Other Conveyances	...	...	...	...	...	9	...	...	9		
Machinery	...	...	...	...	...	5	...	...	5		
Falls	...	...	...	2	...	36	...	I	39		
Suffocation	...	I	...	2	...	5	...	I	9		
Drowning	I	...	...	...	...	I	...	5	7		
Poisoning	...	...	...	...	2	4	...	I	7		
Intemperance	...	...	...	16	...	...	...	...	16		
Other Causes	I	...	...	...	...	7	...	3	11		
SUICIDES—											
Drowning	...	...	7	...	...	...	...	3	10		
Hanging	...	...	11	...	...	...	...	I	12		
Poisoning	...	...	4	...	...	...	...	...	4		
Other Means	...	...	11	...	...	...	...	2	13		
Natural and Unknown Causes	...	...	...	...	...	...	258	...	258		
TOTALS	3	I	33	20	2	100	258	19	436		

TABLE A.

VITAL STATISTICS OF BRADFORD FROM 1885.

Year	Population	Birth Rate	Death Rate	Zymotic Death Rate	Infantile Mortality Rate
1885	203,504	30.6	17.6	1.57	144
1886	205,684	30.6	19.1	2.24	167
1887	207,887	29.8	19.9	2.61	179
1888	210,113	29.8	17.2	1.59	153
1889	212,364	29.5	19.1	2.76	181
1890	214,634	29.1	20.1	2.38	169
1891	216,808	28.7	22.0	2.34	181
1892	217,805	27.4	18.0	1.59	155
1893	219,008	27.9	20.9	3.20	198
1894	220,218	27.1	17.0	1.69	144
1895	221,435	26.6	19.8	2.57	203
1896	222,658	26.7	16.8	1.59	143
1897	223,895	25.4	17.4	2.24	179
1898	225,133	24.8	17.5	2.20	184
1899	226,373	24.3	18.4	2.43	181
1900	278,634	24.1	17.1	1.43	141
1901	279,969	23.0	16.7	1.86	168
1902	280,833	23.3	15.7	1.38	138
1903	281,799	23.4	16.2	1.32	148
1904	282,568	22.2	17.4	2.43	167
1905	283,441	21.3	15.3	1.45	144
1906	284,314	20.9	16.2	1.97	152
1907	285,189	20.1	14.7	0.91	124
1908	286,071	21.0	15.7	1.46	143
1909	286,954	19.2	14.6	0.68	116
1910	287,839	19.1	14.3	1.26	127
1911	288,723	19.0	15.0	1.60	140
1912	289,618	19.3	14.5	0.82	98
1913	290,540	19.6	15.1	1.10	128
1914	290,642	19.6	15.8	1.22	122

Birth Rate
per 1000.



Birth Rate
per 1000.



DEATH RATE, 1875-1914.

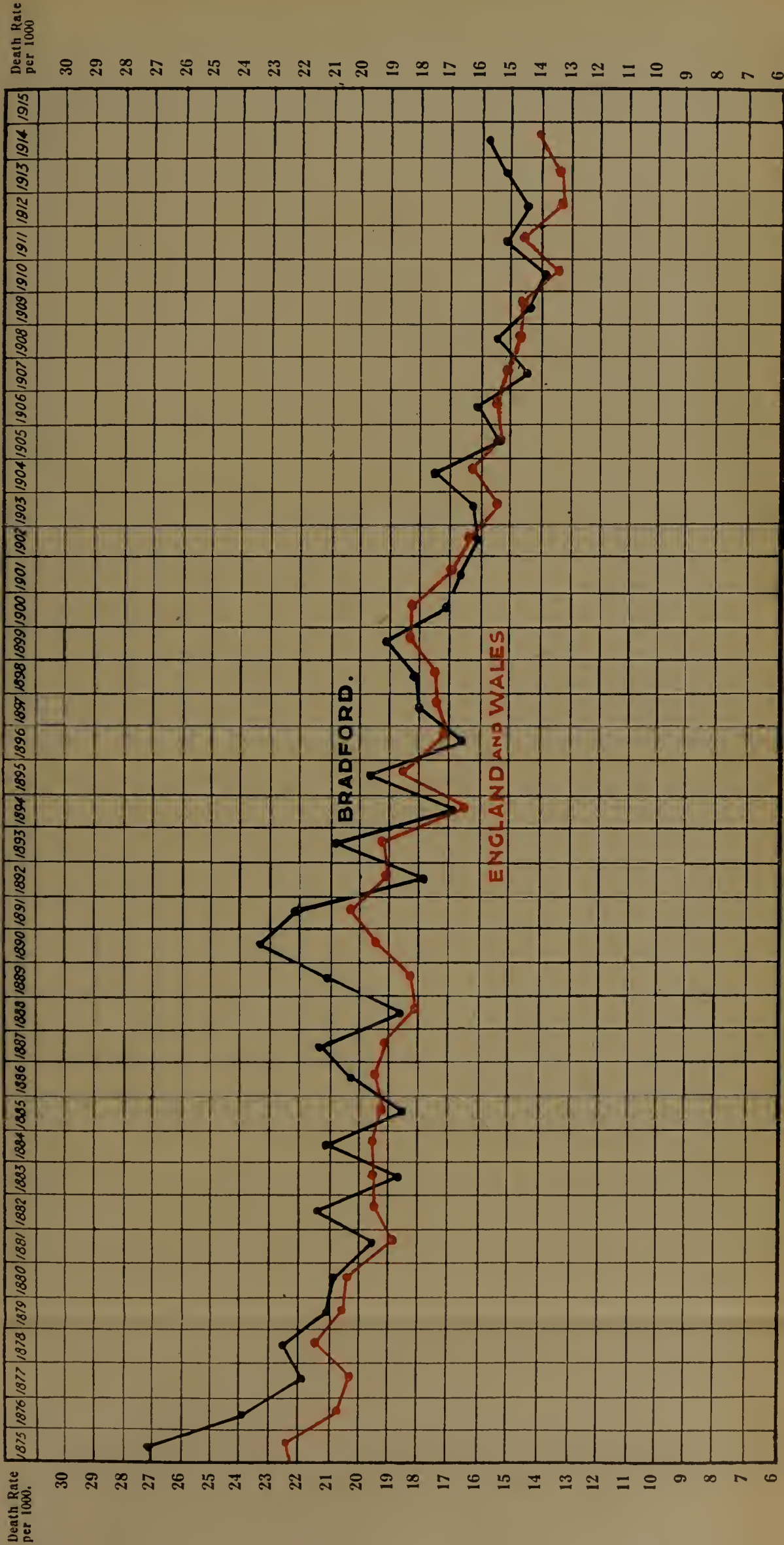


TABLE B.

COMPARATIVE STATISTICS OF GREAT TOWNS.

	Population	Birth Rate	Death Rate	Zymotic Rate	Infantile Mortality Rate
Birmingham ..	868,430	26·8	14·8	1·91	122
BRADFORD	290,642	19·6	15·8	1·22	122
Bristol ..	363,312	21·4	13·3	0·96	100
Halifax ..	100,373	17·8	14·8	0·72	102
Huddersfield ..	112,265	18·1	14·5	0·89	112
Hull	291,118	27·2	15·1	1·74	121
Leeds	459,260	23·4	14·8	1·61	124
Leicester ..	232,664	21·8	13·8	1·33	120
Liverpool ..	767,992	30·1	19·3	2·58	139
London ..	4,516,612	24·6	14·4	1·43	103
Manchester ..	738,538	25·6	16·6	1·87	127
Newcastle ..	273,415	27·7	16·9	2·24	136
Nottingham ..	266,918	23·2	15·1	1·64	145
Portsmouth ..	245,827	23·2	12·4	1·10	85
Salford ..	234,975	26·5	16·4	2·07	125
Sheffield ..	476,971	27·2	16·2	2·48	132
Stoke-on-Trent	241,430	31·7	17·4	2·47	144
West Ham ..	296,570	30·1	14·7	1·86	106

II.—RECORDS OF DISEASE.

(A) THE ZYMOTIC DISEASES.

The principal Zymotic diseases at present recognised in this country are Enteric Fever, Diphtheria, Scarlet Fever, Smallpox, Typhus Fever, Infective Enteritis, Measles, and Whooping Cough.

The total deaths from these diseases in Bradford in 1914 was 356, giving a mortality rate for this group of 1·22 per 1,000. In England and Wales this rate was 1·22, and in the 97 Great Towns 1·54 per 1,000.

The Zymotic death-rates during the past thirty years in Bradford are seen on Table A, page 24. It will be seen that the Zymotic death rate for 1914 was 0·12 per 1,000 higher than the same death-rate for 1913. The mean death-rates from Zymotic diseases for periods of five years show that though temporary fluctuations have occurred this death-rate has been continuously falling.

AVERAGE QUINQUENNIAL ZYMOTIC DEATH-RATES FROM 1871.

1871-75 .. 5·5	1891-95 .. 2·3	1911 .. 1·60
1876-80 .. 3·1	1896-1900.. 2·0	1912 .. 0·82
1881-85 .. 2·1	1901-05 .. 1·7	1913 .. 1·10
1886-90 .. 2·3	1906-10 .. 1·3	1914 .. 1·22

The Zymotic death-rate for the first quarter was 1·62; for the second 1·69; for the third 0·92; and for the fourth 0·66.

The diseases to be notified in Bradford are smallpox, cholera diphtheria, membranous croup, erysipelas, scarlet fever, ophthalmia neonatorum, infective enteritis, Acute Poliomyelitis, Cerebro-Spinal Fever, Tuberculosis, and the fevers known by any of the following names, typhus, typhoid, enteric, relapsing, continued or puerperal.

The number of notifications received from medical practitioners during the year was 1490.

NOTIFICATIONS FOR THE PAST 10 YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Scarlet Fever	950	1047	633	815	1238	870	595	634	529	469
Typhoid Fever	187	236	110	148	81	110	196	256	81	80
Smallpox Continu'd Fever	105	2	—	—	—	—	—	2	—	—
Relapsing Fever	—	1	—	—	—	2	1	—	—	1
Cerebro- Spinal Fever	—	—	—	—	—	—	—	1	—	—
Puerperal Fever	—	—	2	2	1	—	—	2	—	2
Diphth'ra and Croup	23	12	20	18	18	16	26	16	15	21
Ophth'lma Neona- torum..	469	480	277	393	353	337	481	422	449	318
Erysip'las	—	—	—	—	—	—	—	—	—	72
Poli'mye- litis ..	198	224	192	195	215	170	293	233	225	241
Infective Enteritis	—	—	—	—	—	—	—	2	3	2
	—	—	—	—	—	—	—	—	—	284
Total	1932	2002	1234	1571	1906	1505	1592	1568	1302	1490

These numbers do not include the notifications of chickenpox required from time to time, nor notifications of tuberculosis.

Diphtheria. Cases, 318; Deaths, 35; Fatality, per cent., 11·01.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Cases ..	469	480	277	397	357	337	481	422	449	318
Deaths	73	45	41	41	56	36	50	55	53	35
Fatality per cent.	15·6	9·4	14·8	10·3	15·7	10·7	10·4	13·0	11·8	11·0

MORTALITY RATE PER 1,000 IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bradford England and Wales	0·32	0·16	0·14	0·14	0·19	0·12	0·18	0·19	0·18	0·12
	0·16	0·17	0·16	0·15	0·14	0·12	0·13	0·11	0·12	0·15

The number of cases of Diphtheria in 1914 was considerably lower than that for 1912, and the fatality rate was also slightly less. The sickness rate per 1,000 in Bradford was 1·09 as compared with 1·61 in England and Wales, and 1·54 in the County Boroughs of England. The greatest number of cases occurred in the North Ward, where 40 cases were notified, and in the South Ward, where 34 cases occurred.

CASES OF DIPHTHERIA MONTH BY MONTH.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Number of Cases ..	42	33	22	25	25	20	14	9	27	36	30	35

The greatest incidence of the disease fell on children under ten years of age, and the disease was most fatal at four years of age.

CASES AND DEATHS ACCORDING TO AGE.

	Under 1 year	1—2	2—3	3—4	4—5	5—6	6—7	7—8	8—9	9—10	10—15	15—20	Over 20	Total
Cases ..	6	20	13	17	30	37	31	21	17	13	49	24	40	318
Deaths	2	5	2	1	9	4	4	3	1	—	4	—	—	35
Fatality per cent.	33·3	25·0	15·4	5·9	30·0	10·8	12·9	14·3	5·9	0·0	8·2	0·0	0·0	11·0

In 277 cases it was thought advisable to test the house drains where Diphtheria had occurred ; the drains were found defective in 57 or 20·4 per cent. of the cases.

The number of cases removed to hospital was 252, or 79·2 per cent. of the cases.

Enteric Fever. Cases notified, 80 ; Deaths, 22 ; Fatality per cent., 27·5.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Cases ..	187	236	110	148	81	110	196	256	81	80
Deaths	25	49	23	29	17	29	45	51	18	22
Fatality per cent.	13·4	20·8	20·9	19·6	21·0	26·4	22·9	19·9	22·2	27·5

MORTALITY RATES PER 1,000 IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bradford	0·09	0·17	0·08	0·10	0·06	0·10	0·14	0·18	0·06	0·08
England and Wales	0·09	0·09	0·07	0·07	0·06	0·05	0·07	0·04	0·04	0·05

In the Wards the greatest number occurred in East (9 cases), Listerhills (10 cases), and West Bowling (10 cases), while no cases occurred in Idle. The monthly incidence of the disease is shown as follows :—

CASES OF ENTERIC FEVER MONTH BY MONTH.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Number of Cases ..	4	2	12	4	3	2	4	12	6	7	9	15

Compared with other localities the sickness rate in Bradford was 0·28 per 1,000 of the population, as against 0·24 in England and Wales, and 0·24 in the County Boroughs of England.

In 68 cases it was thought advisable to test the house drains ; defects were found in 13 or 19·1 per cent.

The number of cases removed to hospital was 51, 43 going to Leeds Road Hospital, 6 to North Bierley Hospital, and 2 to Calverley Hospital.

The bacteriological examinations carried out with respect to Enteric Fever are referred to in another part of the Report.

Scarlet Fever. Cases, 469 ; Deaths, 6 ; Fatality per cent., 1·28.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Cases ..	950	1047	633	815	1238	870	595	634	529	469
Deaths	44	41	13	14	24	14	9	12	10	6
Fatality per cent.	4·6	3·9	2·1	1·7	1·9	1·6	1·5	1·8	1·9	1·28

MORTALITY RATE PER 1,000 IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bradford	0·15	0·14	0·05	0·05	0·08	0·05	0·03	0·04	0·03	0·02
England and Wales	0·11	0·10	0·09	0·08	0·09	0·06	0·05	0·05	0·06	0·08

The number of cases of Scarlet Fever notified in 1914 is less than in any year since 1897. The sickness rate per 1,000 in Bradford in 1914 was 1·61, as compared with 4·38 in England and Wales, and 4·74 in the County Boroughs of England. The greatest number of cases occurred in Bradford Moor Ward, where 108 cases were notified, and in East Ward, where 45 cases were notified.

CASES OF SCARLET FEVER MONTH BY MONTH.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Number of Cases ..	33	25	38	23	23	33	22	31	44	86	70	41

The cases and deaths classified according to age are seen in the following Table:—

CASES AND DEATHS ACCORDING TO AGE.

	Under 1 year	1-5 years	5-15 years	15-25 years	25-45 years	45-65 years	Over 65 years	Total
Cases	3	106	289	48	21	1	1	469
Deaths.. ..	—	4	2	—	—	—	—	6
Fatality per cent. ..	0·0	3·77	0·69	0·0	0·0	0·0	0·0	1·28

The number of cases removed to hospital was 357, or 76·1 per cent. of the cases.

Small Pox. Cases notified, 0 ; Deaths, 0.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Cases ..	105	2	—	—	—	—	—	2	—	—
Deaths	7	—	—	—	—	—	—	—	—	—
Fatality percent.	6·7	0	—	—	—	—	—	0	—	—

No case of Small Pox occurred in the City during 1914. The Health Committee have at present under consideration the urgent need for permanent provision for the isolation of this disease.

The following Table gives the vaccination returns in the Bradford Union since 1909. The figures have been supplied by Mr. Crowther, the Superintendent Vaccination Officer of the Bradford Union. The increase in the number of persons unprotected by vaccination is to be noted with regret.

VACCINATION STATISTICS.

Year	1 Births	2 Vaccinated	3 Insus- ceptible	4 Dead	5 Con. Objector	6 Post- poned	7 Removed	8 Un- accounted	Percent- age not Vaccinat'd including Columns 5, 6, 7, 8
1909	4544	2501	20	383	1245	53	305	37	39·6
1910	4508	2391	5	409	1317	73	270	43	41·6
1911	4573	2216	11	447	1526	82	239	52	46·1
1912	4702	2081	3	355	1826	120	230	87	52·1
1913	4739	1785	2	450	2037	115	265	85	58·3

The figures for that part of Bradford included in the North Bierley Union, are not available.

Diarrhœa. Deaths, 133 ; Mortality per 1,000, 0·46.

The diseases included in this category fall generally into two groups, those which are zymotic in type and those not so regarded. The distinction between the two is by no means so well recognised, while the confusing character of the nomenclature used in certification adds to the difficulties which present themselves in a consideration of this subject.

There was a considerable decrease in the number of deaths from these diseases last year as compared with the year 1913.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Deaths	177	328	112	246	61	142	249	57	220	133
Mort'lity per 1000	0·62	1·15	0·39	0·86	0·21	0·49	0·86	0·20	0·74	0·46

These diseases were most prevalent in the South, Listerhills, Manningham, Bradford Moor, North, Great Horton, East, and West Wards. Generally speaking therefore the highest mortality from Diarrhœa has occurred in the Wards with the greatest density of population.

The deaths from Diarrhœa were more prevalent in those districts where the sanitary conveniences were of the privy midden type.

The great majority of the deaths occurred in children under one year of age ; 77, or 58 per cent. of the deaths occurring at this age period.

DEATHS AT VARIOUS AGE PERIODS.

Age Periods	Months			Years.							
	0-3	3-6	6-12	0-1	1-2	2-5	5-15	15-25	25-45	45-65	65
Deaths ..	27	24	26	77	9	6	1	—	7	18	15

The disease assumed epidemic forms in the months of August, September, and October.

DEATHS OCCURRING MONTH BY MONTH.

	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Number of Deaths ..	6	5	4	3	9	11	9	30	23	21	8	4	133

Fifty-six per cent. of the deaths took place in the months of August, September, and October.

The number of notifications of cases of zymotic enteritis received in 1914 was 284.

DEATHS IN EACH WARD FROM DIARRHOEAL DISEASES IN 1914.

Ward	Certified as Infective			Not Certified as Infective			Total Deaths from Diarrhoeal Diseases		
	Under 2 yrs.	Others	Total	Under 2 yrs.	Others	Total	Under 2 yrs.	Others	Total
Allerton	—	—	—	1	2	3	1	2	3
Bolton	—	—	—	1	2	3	1	2	3
Bradford Moor ..	1	1	2	4	4	8	5	5	10
East	2	—	2	3	4	7	5	4	9
East Bowling ..	—	—	—	4	2	6	4	2	6
Eccleshill	—	—	—	1	1	2	1	1	2
Exchange	—	—	—	—	—	—	—	—	—
Great Horton ..	1	2	3	4	2	6	5	4	9
Heaton	1	—	1	1	—	1	2	—	2
Idle	—	—	—	—	2	2	—	2	2
Listerhills	3	—	3	4	1	5	7	1	8
Little Horton ..	—	1	1	2	1	3	2	2	4
Manningham	3	—	3	4	5	9	7	5	12
North	5	0	5	11	6	17	16	6	22
North Bierley East ..	—	—	—	1	1	2	1	1	2
North Bierley West ..	—	—	—	1	2	3	1	2	3
South	6	—	6	5	3	8	11	3	14
Thornton	—	—	—	2	—	2	2	—	2
Tong	2	—	2	—	2	2	2	2	4
West	3	—	3	5	2	7	8	2	10
West Bowling	3	—	3	2	1	3	5	1	6
City	30	4	34	56	43	99	86	47	133

Measles. Deaths, 114; Mortality per 1,000, 0·39.

MORTALITY RATE PER 1,000 IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bradford	0·04	0·44	0·17	0·25	0·08	0·49	0·04	0·17	0·12	0·39
England and Wales	0·32	0·27	0·36	0·22	0·35	0·23	0·36	0·35	0·28	0·24

An outbreak of Measles which commenced in the latter part of 1913 continued with some prevalence during the early part of 1914.

Whooping Cough. Deaths, 93; Mortality per 1,000, 0·32.

MORTALITY RATE PER 1,000 IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bradford	0·36	0·13	0·28	0·19	0·15	0·16	0·35	0·04	0·08	0·32
England and Wales	0·25	0·23	0·29	0·27	0·20	0·24	0·21	0·23	0·14	0·21

There was a considerable increase in the mortality rate from Whooping Cough last year, 93 deaths occurring as compared with 22 in the year previous.

Influenza. Deaths, 34.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Deaths	51	32	64	72	87	33	35	22	43	34

The number of deaths from Influenza was about the average recorded in recent years.

Puerperal Fever. Cases, 21 ; Deaths, 10 ; Fatality per cent., 47·6.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Cases ..	23	12	20	18	18	16	26	16	15	21
Deaths	10	9	10	9	2	7	8	9	6	10
Fatality per cent.	43·5	75·0	50·0	50·0	11·1	43·7	30·8	56·2	40·0	47·6
Number of live births to each death	605	660	574	666	2753	784	686	621	968	571

The term Puerperal Fever has been removed from the nomenclature of the Royal College of Physicians. Pyæmia, Septicæmia, or Septic Intoxication occurring in puerperal women should be described as Puerperal Pyæmia, Puerperal Septicæmia, or Puerperal Septic Intoxication.

Erysipelas. Cases, 241 ; Deaths, 2 ; Fatality per cent., 0·8.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Cases ..	198	224	192	195	215	170	293	233	225	241
Deaths	7	9	5	5	10	7	14	6	9	2
Fatality per cent.	3·54	4·02	2·60	2·56	4·65	4·12	4·78	2·58	4·00	0·83

Anthrax. Cases, 11 ; Deaths, 2 ; Fatality per cent. 18.2.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Cases ..	20	11	9	8	7	5	7	8	13	11
Deaths	10	4	3	3	1	1	4	3	2	2
Fatality per cent.	50.0	36.4	33.3	37.5	14.3	20.0	57.1	37.5	15.4	18.2

(B) OTHER DISEASES.

The deaths occurring in the City during 1914 from all diseases are set out on Table III., page 189, which also shows their age periods. This section will only deal with those diseases other than zymotic diseases which call for special comment.

Tuberculosis. Deaths, 457 ; Mortality rate per 1,000, 1.57.

There was an increase of 32 in the number of deaths and an increase of 0.13 per 1,000 in the mortality rate from tuberculosis as compared with 1913.

(A). PULMONARY TUBERCULOSIS. Deaths, 371 ; Mortality rate per 1,000, 1.27.

The figures show an increase in the number of deaths of 62 and an increase in the mortality rate of 0.23 per 1,000 in 1914.

(B). TUBERCULOSIS OTHER THAN PULMONARY. Deaths, 86.
Mortality rate per 1,000, 0·30.

From these diseases the number of deaths show a decrease of 30 and the mortality rate a decrease of 0·10 per 1,000 in 1914.

The subject of Tuberculosis is dealt with later in this Report.

Cancer and Malignant Disease. Deaths, 368 ; Mortality rate per 1,000, 1·27.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Deaths	254	284	285	286	326	292	338	356	349	368
Mortality rate per 1000 ..	0·90	1·00	1·00	1·00	1·14	1·01	1·17	1·23	1·18	1·27

The mortality rate for the present year is the highest on record.

AGE INCIDENCE AT DEATH.

Age Periods ..	1-15	15-25	25-45	45-65	65 and upwards
Deaths ..	5	—	35	186	142

The great majority (89·1 per cent.) of the deaths therefore occurred after 45 years of age.

DEATHS FROM CANCER CLASSIFIED ACCORDING TO THE ORGAN AFFECTED.

	1913.			1914.		
	Males.	Females.	Total.	Males.	Females.	Total.
Cancer of Stomach and Bowels ..	66	68	134	75	82	157
„ Liver	16	27	43	27	17	44
„ Urinary and Generative Organs	14	43	57	12	49	61
„ Breast	—	40	40	—	41	41
„ Head and Face	7	4	11	6	3	9
„ Throat and Tongue ..	20	6	26	13	6	19
„ Other parts of the body	20	18	38	20	17	37
Total	143	206	349	153	215	368

Respiratory Diseases. Deaths, 757 ; Mortality rate per 1,000, 2'60.

There was an increase in the number of these deaths last year. The number of deaths from bronchitis has decreased, but that from pneumonia has increased.

DEATHS FROM BRONCHITIS AND PNEUMONIA IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bron- chitis	431	350	425	403	428	333	322	359	410	381
Pneu- monia	366	340	336	299	341	270	300	307	264	317

AGE INCIDENCE OF DEATHS.

Age Periods	1 year	1-2	2-5	5-15	15-25	25-45	45-65	65 upwards
Bronchitis ..	41	12	2	4	5	12	107	198
Pneumonia ..	66	29	29	11	15	41	81	45

The heavy mortality rate from these diseases in the young and old will be appreciated from the above table.

Deaths from Violence. Deaths, 164 ; Mortality rate per 1,000, 0·56.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Deaths	148	147	140	150	143	122	136	143	143	164
Mortality rate per 1,000 ..	·52	·52	·49	·52	·50	·42	·47	·49	·48	·56

During the year the coroner made inquiries into 490 cases of death.

III. PREVALENCE OF AND CONTROL OF TUBERCULOSIS.

(a) STATISTICS OF MORBIDITY AND MORTALITY.

The number of deaths from all forms of tuberculosis in 1914 was 457, giving a mortality rate of 1·57 per 1,000.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Deaths	442	492	465	536	429	435	426	463	425	457

MORTALITY RATE PER 1,000 IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bradford	1.56	1.73	1.63	1.87	1.50	1.51	1.48	1.60	1.44	1.57
England and Wales..	1.64	1.65	1.62	1.59	1.54	1.43	1.47	1.38	1.34	

There was therefore a slight increase in the mortality from this cause in 1914. During the past thirty years there has been a reduction in the death rate from all forms of tuberculosis in Bradford; this is well seen in the following table, which shows the average mortality rate per 1,000 for five yearly periods from 1881 :—

AVERAGE MORTALITY RATE PER 1,000 FROM TUBERCULOSIS IN
BRADFORD FOR PERIODS OF FIVE YEARS FROM 1881.

Periods ..	1881-85	1886-90	1891-95	1896-1900	1901-05	1906-10
Average Mortality rate per 1,000 ..	2.71	2.47	2.26	2.12	1.84	1.65

1911 .. 1.48	} Average for 4 years .. 1.52
1912 .. 1.60	
1913 .. 1.44	
1914 .. 1.57	

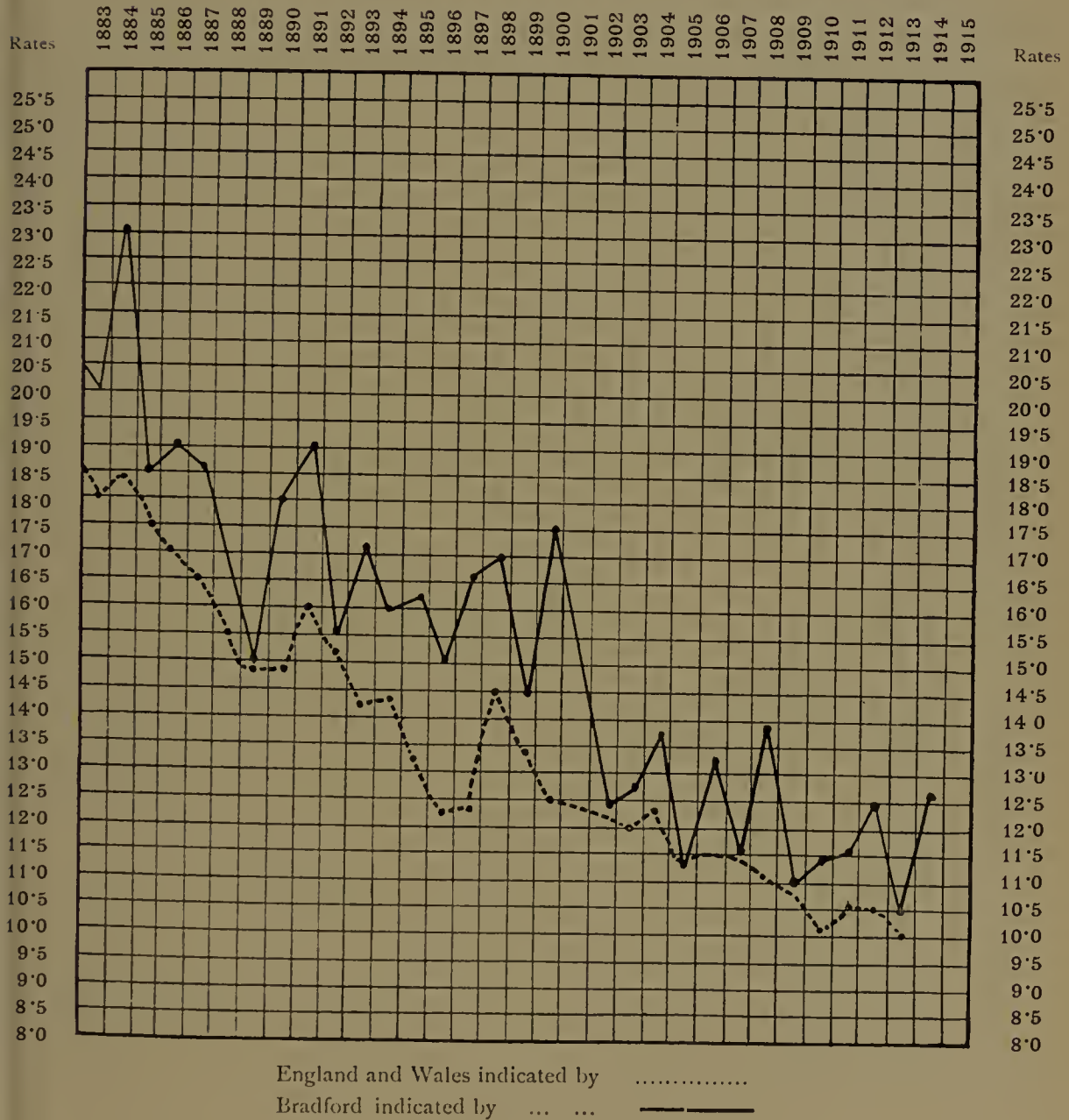
The general standardised mortality rate for tuberculosis in 1914 was 1.5431 per 1,000.

(A) *Pulmonary Tuberculosis*. Deaths, 371; Mortality rate per 1,000, 1.27.

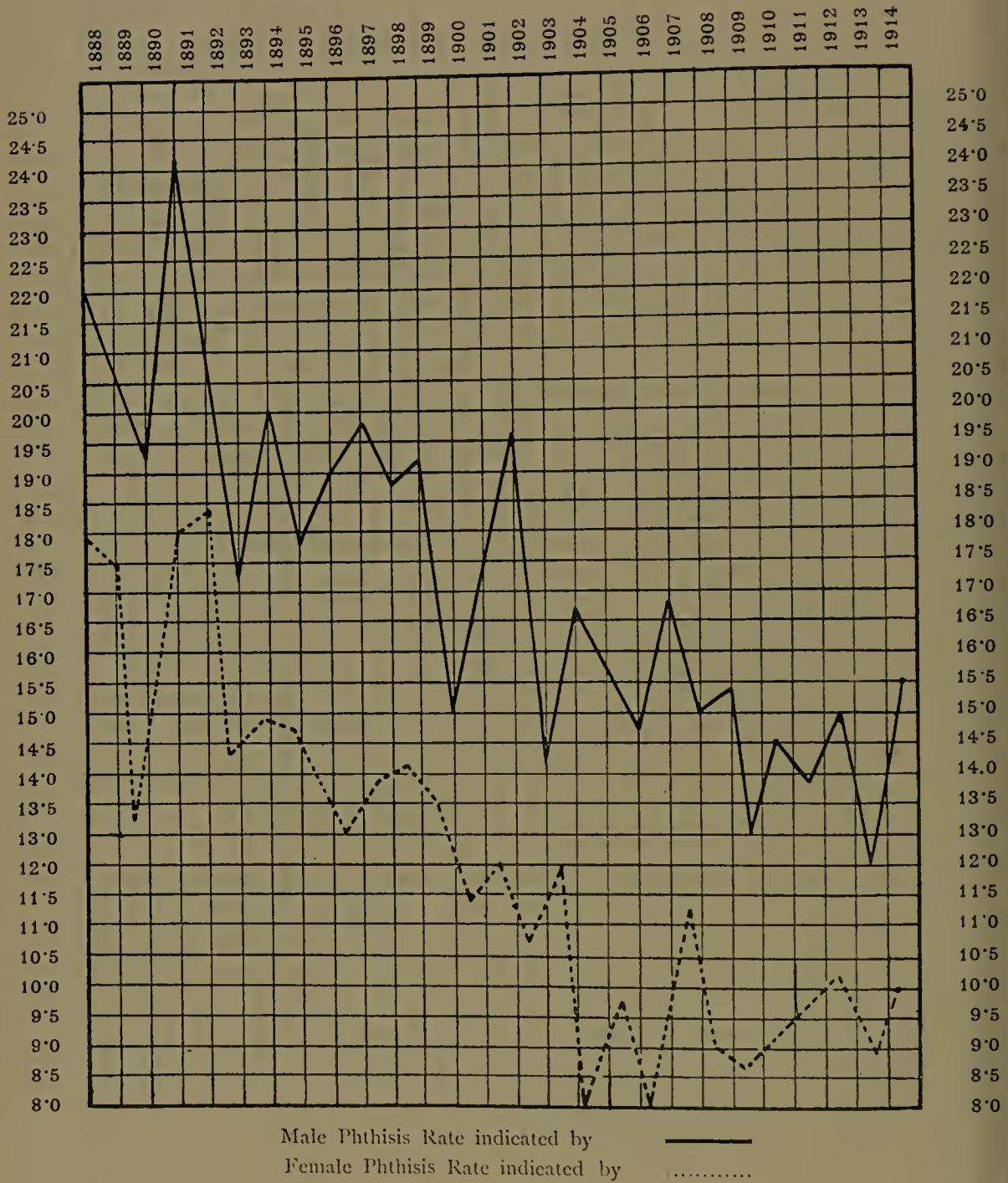
RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Deaths	321	374	330	395	319	329	332	364	309	371

DEATH RATES FROM PULMONARY TUBERCULOSIS PER 10,000 OF THE POPULATION
IN ENGLAND AND WALES AND BRADFORD, 1883-1914.



DEATH RATE FROM PHTHISIS PER 10,000 OF THE POPULATION.



MORTALITY RATE PER 1,000 IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bradford	1.13	1.32	1.16	1.38	1.11	1.14	1.15	1.25	1.04	1.27
England and Wales..	1.14	1.15	1.14	1.11	1.08	1.01	1.06	1.05	1.00	

There was a considerable increase in the number of deaths and in the mortality rate from pulmonary tuberculosis last year. Considering the deaths in relation to sex the death-rate from pulmonary tuberculosis was in 1914 among males, 1.57 per 1,000, and among females, 1.02 per 1,000. Applying the standardising factors for purposes of comparison the standardised male death-rate was 1.40 per 1,000, and the standardised female death-rate was 0.94 per 1,000; the standardised rate for the whole population in pulmonary tuberculosis is 1.15 per 1,000. The chart on opposite page shows that the general death-rate in the male sex for the past thirty years has always been greater than that of the female sex, while the fall in the male death-rate has at the same time during that period been correspondingly less.

The notification of pulmonary tuberculosis was under the general orders of the Local Government Board compulsory throughout the whole year, and the notifications received numbered 688. These notifications classified according to age and sex are seen in the following table.

NOTIFICATION OF PULMONARY TUBERCULOSIS, 1914.

	PRIMARY NOTIFICATIONS											Total Notifications (i.e., including cases previously notified by other Doctors)	
	AGE PERIODS												
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and up- wards		Total
Males	1	5	13	19	36	35	84	86	68	47	13	407	456
Females	—	3	13	10	29	50	76	47	26	20	7	281	344
Total	1	8	26	29	65	85	160	133	94	67	20	688	800

At the present moment the total number of notifications of pulmonary tuberculosis can hardly be taken as an index of the prevalence of this form of the disease. Generally speaking notification chiefly refers to those well established cases respecting which the diagnosis is no longer in doubt, but with the further development of antituberculous work which is now taking place, many cases in an early stage and possibly of a doubtful nature will be brought to light, and for some years the number of notifications may be expected to be high.

(B) *Other Forms of Tuberculosis.* Deaths, 86; Mortality rate per 1,000, 0·30.

RECORD OF PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Deaths	121	118	135	141	110	106	94	99	116	86

MORTALITY RATE PER 1,000 IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bradford	0·43	0·43	0·47	0·49	0·39	0·37	0·33	0·35	0·39	0·30
England and Wales..	0·49	0·50	0·47	0·47	0·45	0·43	0·41	0·33	0·35	—

There was a decrease in the number of deaths and in the death-rate from the forms of tuberculosis other than pulmonary. The death rate is the lowest on record. The standardised death-rates for other forms of tuberculosis for Bradford in 1914 are for males 0·42, for females 0·30, and generally, 0·36, per 1,000.

Notification of other forms of tuberculosis was in operation during the whole of the year, when 208 cases were notified.

(b) MEASURES FOR PREVENTION AND TREATMENT.

The present arrangements consist of a tuberculosis dispensary with a staff of tuberculosis officers and nurses, and the use of Bierley Hall Hospital and certain wards at the City Hospital for the treatment of pulmonary cases. One tuberculosis medical officer began duty in May, 1912, and a second officer in April, 1913. At Bierley Hall Hospital fifty beds were at first available for patients, and accommodation was found there in 1914 for other sixteen patients by the erection of shelters and the rearrangement of the wards. As this hospital is excellently situated the cases admitted have chiefly been those in which there was some prospect of cure. For the later cases requiring isolation and educative treatment provision has been made at Leeds Road Hospital by setting aside a pavilion with twenty-four beds. The total residential accommodation therefore under the temporary arrangements of the City Council amounts to ninety beds. At Bierley Hall Hospital a

resident physician was appointed in 1913 and at Leeds Road Hospital a resident assistant physician was appointed early in 1914 for this and other work. The permanent arrangements provide for a central well-equipped dispensary in place of the temporary and ill-adapted dispensary at present in use. In addition it was decided to erect a new sanatorium at Grassington and to extend the accommodation at Bierley Hall.

The plans of the new sanatorium at Grassington have been prepared and now finally approved by the Local Government Board, and the work was begun during the current year. This institution will contain 152 beds, fifty-two of which are for men, fifty-two for women, and forty-eight for children. The accommodation for children is in a separate part of the institution, and special provision has been made for their education while in the sanatorium. At Bierley Hall the extension will provide for fifty cases of surgical tuberculosis, and any further accommodation for tubercle which experience may prove necessary can be arranged for here. The plans here have not yet been finally submitted for the approval of the Local Government Board.

It is the intention of the Council when the permanent scheme is in operation to deal with all cases of tuberculosis whether insured or non-insured, whether or not in receipt of poor law relief, and whether suffering from the pulmonary form of the disease or other forms. Since the commencement of the work in Bradford both insured and non-insured have been treated at the dispensary and residential institutions. The agreement in operation with the Insurance Committee is fully described in the report of last year.

On the notification of a case of Tuberculosis it is visited at home by one of the Health visitors and inquiries are made as to the possible sources of infection, the danger of the spread of the disease, the housing accommodation and the general sanitary circumstances. Advice is given as to the hygienic treatment of the case and the patient is urged

to attend the dispensary for general inspection and treatment if need be. Arrangements are made at the same time for the examination of contacts which is done at the dispensary. On a consideration of all the facts thus elicited respecting each case, the results of the clinical examination at the Dispensary and the report of the private medical attendant, the most suitable method of treatment is determined upon.

All cases are kept in touch with either by their continuous attendance at the dispensary or by repeated home visitation by the Health visitors. The general results of treatment have been very encouraging and as the work becomes better known and appreciated the patients themselves and their medical attendants are utilising in an increasing degree the facilities offered. At present the work is handicapped by the increasing pressure which is being put upon the temporary arrangements.

(c) **WORK DONE DURING 1914.**

The following table shows the number of cases treated at the Sanatorium, Hospital and Dispensary during the year :—

GENERAL RESULTS OF TREATMENT IN CASES OF PULMONARY
TUBERCULOSIS.

	Sanatorium			Hospital			Dispensary			Total		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Improved	47	46	93	54	55	109	162	163	325	263	264	527
Unrelieved... ..	14	10	24	47	39	86	33	37	70	94	86	180
Died	—	—	—	20	15	35	—	—	—	20	15	35
Remaining under Treatment 31/12/14 ...	8	15	23	26	11	36	127	142	269	161	168	329
Total Cases Treated ...	69	71	140	147	120	267	322	342	664	538	533	1071

NOTES :—Dispensary cases include only those who have received dispensary treatment alone. "Improved" means that the patient's working capacity is almost restored. "Discharged unrelieved" includes six males and seven females under Sanatorium Treatment, and four males and ten females under Hospital Treatment, who were discharged for other than Medical reasons.

The total number of cases which had passed through the tuberculosis dispensary since its opening to 31st December, 1914, was 1987, of which 455 were contacts. The number of primary visits to cases of tuberculosis made by the health visitors during 1914 was 905, and the number of subsequent visits was 4867.

REPORT BY HAROLD VALLOW, M.D., ON THE WORK OF THE
DISPENSARY.

As a receiving house and centre of diagnosis, 460 new patients have been examined at the Dispensary. Of these 333 were found to have definite tuberculosis in one or other of its forms, 41 were found to be suspicious, and 86 were not tuberculous.

The following table shows the proportion of men, women, and children :—

Diagnosis.	Men.	Women.	Children.	Total.
Definite Tuberculosis	151	114	68	333
Doubtful	6	11	24	41
Not Tuberculous ..	21	24	24	69
Other Diseases ..	10	6	1	17
Totals ..	188	155	117	460

Of the 151 men found to be suffering from definite tuberculosis 4 had tuberculous glands of the neck, 1 a tuberculous knee, and 146 pulmonary tuberculosis. Of the 114 women 2 had glands of the neck, 1 a tuberculous kidney, 1 tuberculous ovaries, and 110 pulmonary tuberculosis. Of the 68 children 10 had glands of the neck, 1 tuberculous peritonitis, 4 lupus, and 53 pulmonary tuberculosis. Many of the doubtful cases in children had slight glands of the neck.

Of those men found to have no tuberculosis, 3 had general debility, 4 bronchial catarrh, 2 asthma and bronchitis, 1 gastric ulcer and heart disease, 1 chronic bronchitis, 1 acute neurasthenia, 1 occupational neurosis. Of the women found to be not tuberculous, 3 had debility, 2 Bright's disease, 1 hysteria. Of the children found to be not tuberculous, 1 had anæmia, 1 infantile paralysis.

The following table shows how the new patients have been sent to the various institutions :—

Referred to	Men.	Women.	Children.	Total.
Bierley Hall	84	66	24	174
Leeds Road	32	18	4	54
Union Infirmary	2	2	2	6
Doctor.. ..	12	16	1	29
Bradford Royal Infirmary	2	1	1	4
Dispensary	15	18	49	82
Open-air School	—	—	7	7
Other places	—	1	1	2
Total	147	122	89	358

Many patients, suspected of suffering from tuberculosis, have been kept under observation, either at the Dispensary, or for a short time at the Bierley Hall Hospital, and many of them treated by various methods in order to prevent the development of this disease.

The Dispensary has also been a centre for curative treatment, and many cases have been treated after leaving the Sanatorium; those

who refused to go to any Institution, and preferred to be treated at the Dispensary were given such treatment.

The number of undoubted contacts examined has been 88. Many of the doubtful cases amongst the men, women, and children, and many of those found to be non-tuberculous, might be classed as "contacts," but as the association has not been too definite, I have classified them as new cases. Of the 88 "definite" contacts examined 60 were found to have no tuberculosis, 20 were regarded with suspicion and kept under observation, and 8 were found to have definite lung tuberculosis.

Six of the non-tuberculous cases were found to be suffering from other ailments, and referred for suitable treatment. Of those found to be suffering from definite tuberculosis 1 was referred to the Leeds Road Hospital. The others were either treated at the Dispensary or at the Sanatorium. One suffering from bronchitis was referred to the Union Infirmary.

The following table shows details of the contact examination :—

	Not Tuberculous	Doubtful*	Definitely Tuberculous
Boys.. ..	16	5	2
Girls	24	12	2
Men	6	1	4
Women	14	2	—

* The Doubtful cases would be called definite cases of tuberculosis by many examiners.

By the work of the After Care Committee many suitable occupations have been found for patients attending the Dispensary, and milk

has been allowed by the Health and Insurance Committees. The success of many of these patients in suitable employments has been very gratifying.

As a bureau for information and education the Dispensary has always been open, and much information has been given to various enquirers from time to time, both publicly and at the Dispensary.

In addition to the functions mentioned, a seventh and very important one has been added. The whole of the work done by the doctors in the homes has been kept in touch with, and the records carefully inspected from time to time.

Old Cases.—The old cases have been treated at the Dispensary, at the Bierley Hall Hospital, and at the Leeds Road Hospital.

The only recommendation I wish to make is that more commodious premises be found, so that the work at the Dispensary can be done under reasonably good conditions, and that it will not be hampered because of lack of space. The health of the workers at the Dispensary also requires that such accommodation should be found.

IV.—MATERNITY AND CHILD WELFARE.

During the year considerable progress was made in an attempt to organise a complete and unified scheme for the safeguarding of maternity and the preservation of health in infants and young children. The scheme itself comprises several units which may be briefly here described.

i. *Ante-Natal Clinic and Maternity Hospital.* This institution is situated in Horton Lane. At the ante-natal clinic expectant mothers may attend and receive advice on all matters likely to affect their own health and the general well-being of the child to be born. The maternity

hospital will deal with difficult cases of labour and with complications arising after parturition. Cases of labour when the home conditions are unsuitable may also be received into the hospital. It contains nine beds and has a special labour room and operating theatre. From the Maternity Hospital municipal midwives may be engaged for normal cases in their own homes.

ii. Infant Clinic and Hospital. This institution was established in June, 1912, and began work in temporary premises in Channing Hall. The work was removed to new and specially designed premises in Morley Street in March, 1914.

The chief objects of the clinic are as follows :—

- (a) To afford mothers the best available advice on all questions affecting the health and welfare of infancy and generally to instruct mothers in infant hygiene.
- (b) To encourage all mothers wherever possible to breast feed their infants.
- (c) To prescribe in detail the exact dietary for all infants especially for those handfed, and to ascertain and afford if need be the means of procuring the special dietary required.
- (d) To maintain a skilled supervision of all infants brought to the consultations in order that any abnormal conditions may be detected at the earliest possible moment.
- (e) To provide medical treatment in hospital or otherwise of disease in infancy when this cannot be otherwise secured.

An infant brought to the Clinic is seen by one of the medical staff there who examines it carefully and records all the important facts in its physical condition and family history. The mother's own health is enquired into and detailed advice is given as to the rearing of the infant

and the maintenance of maternal health during lactation. If the infant is ailing the physician attempts to ascertain the cause of the illness and takes all necessary measures to secure treatment for it. A medical dispensary is provided at the Clinic, but drug treatment is only used as ancillary to other means, as the main object of the institution is to preserve the health of infants by hygienic measures. In addition to questions of feeding, the methods and kinds of clothing, bathing, washing the eyes and mouth, the general toilet of the skin, and all other questions of infancy receive attention, and instructions therein are given to the mothers.

Where an infant is so severely ill or requires more detailed attention than can be given as an outpatient at the Clinic the offer of a short period of residence in the infants' hospital is made. In the new premises now occupied the infants' hospital is attached, and provides accommodation for twenty hand-fed infants. The cases admitted are chiefly those suffering from chronic nutritional disorders. No infectious cases are treated here.

iii. The Feeding of Nursing and Expectant Mothers. To encourage poor expectant and nursing mothers to feed their infants on the breast, and to maintain their nutrition, arrangements are made to supply them with dinners on five days of the week. These are specially prepared at a central cooking kitchen and distributed by motor vans in heat-proof vessels to seven conveniently situated feeding centres in the city. After the meals the women health inspectors take the opportunity of giving advice and instruction on such subjects as personal and domestic hygiene. The actual serving of the meals is undertaken by members of the Bradford Maternity Care Committee.

iv. Artificial Feeding of Infants. Where the natural methods of feeding infants fail milk preparations are prescribed at the Infant Clinic and dispensed in the milk laboratory there according to the prescrip-

tion of the physician. If only more simple preparations are indicated advice is given to the mother as to how she may prepare these, the mother being actually shown the method of preparation. It has been found necessary in the case of many poorer infants to make arrangements for the free provision of a suitable food when they are hand-fed. The distribution of this free feeding is supervised by a sub-committee of the Health Committee who go carefully into the economic circumstances in the home and who recommend a free supply of milk when the income coming into the home after deducting the rent is less than 4s. per head per week.

v. The Health of Children under School Age. During the current year an attempt has been made to continue the supervision of child life from the period of infancy to the time of entering school. This will be carried out in premises situate in close proximity to the infant clinic, and by the work here it is hoped that the young child will not be lost sight of and his physical health so maintained that he can enter school in every way fitted to receive instruction.

vi. Health Visitation. The home supervision of children is carried out by a staff of health visitors who are in close touch with the various sub-departments of the child welfare scheme. The visitors call at the homes after notification of the birth under the Notification of Births Act, and follow up the work done for the supervision of health. They are also in close touch with the general sanitary department dealing with structural conditions.

(A) MATERNITY AND PRE-NATAL HYGIENE.

At the close of the year there were fifty-six midwives practising in the City of whom twenty-four held the Central Midwives Board Certificate or a certificate from a recognised hospital, while thirty-two were on the register as *bona fide* practitioners before the passing of the Midwives Act, 1902.

In Bradford the midwives attended in 1914 about 51 per cent. of the births. The number of notifications of sending for medical help was 355, or roughly 12·0 per cent. of their cases. A list of these notifications follows. In 229 cases medical aid was called in on account of the mother, and in 126 cases on account of the child. In the cases where medical help was required on account of the mother, in 211 the circumstances arose during the confinement, and in fifty-five during the ensuing ten days.

MEDICAL AID NOTIFICATIONS, 1913.

MOTHER.

Premature births 9	A.P. Hæmorrhage 4
Malpresentations 33	Placenta prævia 5
Contracted pelvis 30	High temperature 13
Ruptured perinæum.. .. 29	Prolapse of uterus 2
Instrumental labour.. .. 24	Eclampsia 3
Adherent placenta 18	Varicose veins 1
Uterine inertia 38	Illness of mother after con-
P.P. Hæmorrhage 6	finement 14
Total 229	

CHILD.

Malformations 13	Cyanosis 3
Debility of infant 44	Circumcision 1
Convulsions 9	Skin disease 1
Inflammation in eyes .. 55	
Total 126	

Notice was sent to the Local Supervising Authority of the deaths of fourteen infants under the care of midwives before the arrival of a medical practitioner. The midwives reported 121 cases of still-births, or about 4·5 per cent. of their cases, in 38 of these medical aid was obtained before the birth.

The number of inspections made by the Midwives Inspector was 1,032, of which 450 were inspections of the midwives' homes, registers and appliances, 347 special inspections of their work, and 148 special visits to supervise the care of the infant's eyes.

Two infringements of the Rules of the Central Midwives Board were dealt with, and in one case a *prima facie* case of negligence was found and reported to the Board, who cautioned the midwife and placed her under special supervision for six months.

The number of cases of puerperal fever occurring in the practice of midwives was seven.

A course of lectures for the purpose of preparing pupil midwives for the Examination of the Central Midwives Board was given under arrangements made with the Education Committee by a recognised teacher and was attended by 33 pupils.

The kind of professional attendance selected for confinements in the working classes varies largely with the sequence of the pregnancy. In this part of the population in about 40 per cent. of first births doctors are in attendance, while after the fourth confinement in only about 20 per cent. are doctors chosen to attend. The following table shows the nature of the attendance at 3,723 births occurring last year and visited by the health visitors. These 3,723 births represent about 65 per cent. of the births occurring in the city and are selected by the visitors as those births where visitation appears most necessary.

PROFESSIONAL ATTENDANCE IN MIDWIFERY.

No. of Pregnancy.	No. of Births.	Attendant		Per cent. attended by Doctor.
		Doctor.	Midwife.	
1st	961	383	578	39·1
2nd	809	271	538	33·0
3rd	518	133	385	25·1
4th	401	99	302	24·1
5th	291	59	232	20·3
6th	225	42	183	18·7
7th	167	26	141	15·6
8th	98	19	79	19·4
9th	83	18	65	2·2
10th	65	10	56	15·4
11th	39	6	33	15·4
12th	26	2	24	7·6
13th	15	—	15	—
14th	10	1	9	10·0
15th	5	1	4	20·0
16th	6	3	3	50·0
17th	1	1	—	100·0
18th	2	—	2	—
Total ..	3723	1074	2649	28·8

The number of deaths which arise in Bradford from congenital causes is very large and shows little sign of any material decrease. At the present moment it accounts for roughly 30 to 40 per cent. of the mortality amongst infants. These deaths chiefly occur within the first four weeks of life and the numbers at these ages in each year from 1905 are shown in the following table :—

DEATHS IN THE FIRST FOUR WEEKS OF LIFE.

Year	Week				Total	Proportion of Infantile Deaths
	1	2	3	4		
1905	185	35	39	39	295	33·8
1906	189	40	45	18	292	32·3
1907	153	43	37	30	263	36·9
1908	202	28	60	28	318	37·0
1909	189	26	29	29	273	42·8
1910	154	34	29	32	248	35·8
1911	185	40	31	26	282	36·7
1912	165	29	32	18	244	44·1
1913	187	38	36	18	279	37·6
1914	156	34	41	22	253	36·5

But the full extent of the vital loss to the community is not estimated by the number of actual deaths registered as due to congenital causes for each year in Bradford. A large number of viable children are born dead, who but for the same causes might have lived healthy lives. The number of these still-born infants cannot be correctly stated,

but a near approximation is got from the notifications under the Notification of Births Act, 1907. During the past five years the numbers of still-births notified have been in 1910, 167; in 1911, 220; in 1912, 230; in 1913, 270; and in 1914, 237. The causes which bring about these deaths and still-births amounting together in Bradford each year to about 500 have relationship to the life of the infant before birth.

During 1914 a careful enquiry was made into all the still births (121 in number) occurring in the practice of midwives in the city. The following tables show the duration of intra-uterine life, the condition of the foetus and the presentation in each case.

DURATION OF INTRA-UTERINE LIFE.

Time.				Cases.
Under 7 months	..	..	..	5
7 months	..	..	..	27
8 months	..	..	..	18
Full time	..	..	..	71

CONDITION OF FŒTUS.

Number macerated	..	..	68
Number not macerated	..	..	53

PRESENTATION.

Vertex	72	Shoulder	2
Breech	19	Placenta prævia ..	1
Funis	5	Transverse	1
Footling	8	Unknown	13
Total ..			121

It will therefore be noted that in more than 60 per cent. of the cases the still births occurred at full time, while in 55 per cent. of the cases the foetus had died before labour set in.

Of the 121 still births in the practice of midwives 16 or 13.2 per cent. were illegitimate children; this is more than twice the rate of illegitimacy among live births, which in 1914 was 6.0 per cent.

The apparent causes of the still birth may be set out as follows:—

Cause.					No. of Cases.
Presentation.	Breech presentation	..	..	..	13
	Funis presentation	..	..	..	5
	Placenta prævia ..	..	..	..	1
	Other malpresentation	..	..	..	5
Mother.	Contracted Pelvis	..	..	..	11
	Uterine inertia ..	..	..	..	11
	General Debility of mother	..	..	..	22
	Maternal Shock from operation	..	..	..	6
	Maternal Shock from accident	..	..	..	10
	Over-exertion ..	..	..	..	3
	Kidney disease ..	..	..	..	3

	Cause.					No. of Cases.
Child.	{ Hydrocephalus	..	..	..	..	3
	{ Hydramnios	..	..	..	..	3
	{ Other malformation of foetus	..	..	..	..	1
	Antipartum hæmorrhage	..	..	..	..	5
	Syphilis	..	..	..	..	9
	Unknown	..	..	..	..	10
Total						121

It will therefore be seen that the presentation was associated with the cause of the still birth in 24 or 20 per cent. of the cases ; some maternal condition in 66 or over 50 per cent. of the cases ; some abnormal condition of the foetus in 7 or 5·8 per cent. ; antipartum hæmorrhage in 5 or 4·0 per cent. ; and syphilis in 9 or 7·4 per cent. of the still births.

The pregnancy at which the still birth occurred was in 34 the first ; in 11 the second ; in 13 the third ; in 13 the fourth ; in 8 the fifth ; in 8 the sixth ; in 9 the seventh ; in 6 the eighth ; in 6 the ninth ; in 5 the tenth ; in 2 the twelfth ; in 3 the thirteenth ; in 2 the fourteenth ; and in 1 the nineteenth. Comparing these results with the incidence of the pregnancy in the births attended by midwives we find that the first pregnancy shows a high still-birth rate, and that while this rate is lowest at the second pregnancy it progressively rises until at the seventh pregnancy it passes the rate at the first pregnancy.

MIDWIVES' CASES.

RATE OF STILL BIRTHS AT EACH PREGNANCY.

Pregnancy.	No. of cases attended.	No of Still-births.	Rate per cent.
1st	578	34	5.9
2nd	538	11	2.0
3rd	385	13	3.3
4th	302	13	4.3
5th	232	8	3.4
6th	183	8	4.4
7th	141	9	6.4
8th onwards	290	25	8.6
Total	2649	121	4.5

In thirty-nine cases the women had previously borne still-born children, as follows:—

No. of previous still-born children.	Cases.
1	18
2	5
3	6
4	3
5	1
6	1
7	3
8	2
Total	39

Among the 2,071 women who had previously borne at least one child 216 had had a previous still birth, this number therefore gave birth at their subsequent pregnancies to 39 still born children, or 18.0 per cent., while 1,855 women who had not had still born children previously give birth at their second or later pregnancy to 48 still born children, or 2.5 per cent. It follows therefore that the liability generally to still birth is about seven times greater among women who have previously borne still born children.

(B) INFANCY.

During the year 1914 the number of births registered in Bradford was 5,709, while the number notified under the Notification of Births Act, 1907, was 5,667.

During the past three years about 98 per cent. of the births registered have been notified.

RECORD OF PREVIOUS YEARS.

	1910	1911	1912	1913	1914
Births registered ..	5490	5480	5586	5811	5709
Births notified ..	5035	5307	5582	5666	5667
*Notifications to 100 registrations ..	91.7	96.8	99.9	97.3	99.2

* The comparisons here are not quite accurate as the births notified include still-births which are not registered.

Although the percentage of births notified is satisfactorily high, considerable delay occurs frequently in the dispatch of the notification. This apparently is due to the confusion which is apt to arise when one duty is required of so many different persons.

The notifications under the Act must be made by (1) the father of the child if he is actually resident in the house, and (2) any person in attendance on the mother at the time of or within six hours of the birth. The cases to be notified include not only live births, but also still-births after the seventh month of pregnancy. The notification has to be made within thirty-six hours after the birth and a penalty of 20s. is attached to failure to notify within that time with the proviso that a person shall not be liable to a penalty if he satisfies the Court that he had reasonable grounds to believe that notice had already been given by some other person. The persons notifying and the time of receipt of notification is seen in the following table :—

TIME OF RECEIPT OF NOTIFICATIONS OF BIRTH IN 1914.

Persons notifying	Receipt of Notification					1—2 months	2—3 months	Total	Per cent. received late
	Within 2 days	3—7 days	1—2 weeks	2—3 weeks	3—4 weeks				
Doctor.. ..	1736	158	27	5	1	7	3	1937	10·3
Midwife ..	2651	127	6	—	—	—	—	2784	3·9
Father ..	613	67	14	5	—	—	—	699	12·3
*Doctor and Midwife ..	111	5	—	—	—	—	—	116	4·3
*Father and Doctor ..	18	4	—	—	—	—	—	22	10·1
*Father and Midwife ..	15	4	—	—	—	—	—	19	21·0
Institutions ..	76	12	2	—	—	—	—	90	15·5
Total ..	5220	377	49	10	1	7	3	5667	7·8

* When two notifications have been received only one entry has been made in the table under the time of the receipt of the first notification.

Adding the births not notified it would appear the notification is not properly carried out in about 10 per cent. of the cases.

Following the receipt of the notification a large proportion of the births are visited by the Health Visitors to advise the mother as to the rearing of the infant. The visit is almost invariably welcomed especially when it is a first baby. The mother is encouraged to talk about her family and the visitor tries to form in her own mind an estimate of the peculiar dangers to its health to which this baby is likely to be exposed, and when the risks seem great the case is marked for further early visiting. The baby is weighed and particulars of the general condition and weight are noted for reference.

The selection of the cases for visitation depends largely on the local knowledge of the visitor, but speaking generally all cases notified by midwives are visited as soon as possible after the birth as well as those cases with doctors in attendance where the home circumstances are known to be poor. The number of infants notified in 1914 visited by the health visitors was 3,723.

BIRTHS VISITED IN 1914.

Person in attendance	Times between Birth and Visit					Total
	1 week	2 weeks	3 weeks	4 weeks	Over 4 weeks	
Doctor ..	263	347	235	132	197	1174
Midwife ..	1832	426	177	79	35	2549

The infants noted for re-visitation fall generally into one or more of the following six classes :—(1) infants found hand fed or partly hand fed at the time of the first visit ; (2) infants whose mothers are likely to give over breast feeding before nine months have elapsed ; (3) infants in families where already one or more infantile deaths have

occurred ; (4) premature infants and the infants of diseased parents ; (5) infants who from any other cause social, or physical, appearing to the health visitor require continuous supervision ; and (6) infants where revisitation is specially asked for by the parents, infant clinic or otherwise.

Of the 3,723 births visited it was considered that 371 required visitation once only during the first year while 3,352 were selected for frequent revisitation during their first year of life. The total number of visits paid in 1914 to infants was 23,384.

The first and foremost duty of the health visitor is to promote breast feeding and the early visitation places her in a good position to do this. It cannot be too strongly insisted on that no other kind of feeding of infants is to be compared with that which nature has provided, and any system of preservation of infant life which does anything to encourage the belief that there is to be found an efficient substitute for the healthy mother's milk is foredoomed to failure. It is right and proper that every effort should be made to provide the hand fed infant with the best food which the wisdom of man can devise, but the provision of such a food must be confined to infants who from a good and sufficient cause can not be fed naturally. It must never be so used as to encourage the mother to give breast feeding up.

During the year 2,170 infants under observation completed their first year of life, of these 1,933 appeared healthy at birth, but in only 1,523 was the infants health considered satisfactory at the end of the year, while the number whose health was considered poor had risen from 41 at birth to 153 at the end of the first year.

The number of these 2,170 infants hand fed from birth was 154, the reasons given for resorting to hand feeding at once being the mother's health in 37 cases, want of breast milk in 86 cases, and the mother

returning to work in 16 cases. Other 22 infants had mixed feeding from birth, while of the remainder in 101 cases the infant was fed otherwise than on the breast before the end of the first month, in 480 between one and three months, in 395 between three and six months, and in 152 between six and nine months. The number fed on the breast wholly for nine months was only 865, or rather less than 40 per cent. of the infants.

FEEDING OF INFANTS COMPLETING THE FIRST YEAR.

	Hand fed from birth	Mixed feeding from birth	Wholly breast fed				
			Under 1 month	Under 3 months	Under 6 months	Under 9 months	Over 9 months
Infants ..	154	22	101	480	395	152	865
Percentage	7.0	1.0	4.6	22.1	18.2	7.0	39.9

Only 46.9 per cent. of the children were breast fed for a period over six months, as against 47.3 in 1913; there are therefore 53.1 per cent. not breast fed for six months. The reasons given for this early weaning or partial weaning was loss of milk in 313 cases, insufficiency of milk in 246 cases, the mother's health in 102 cases, the mother working in 185 cases, the doctors' orders in 114 cases, the child's illness in 5 cases, and other reasons in 11 cases.

Of the causes which operate in Bradford which interfere with breast feeding, married women's work is very important. Work outside the home appeared to be the principal cause in bringing about hand feeding in no less than 337 cases, or nearly 30 per cent. of the infants hand fed.

WORK OF MOTHERS VISITED IN 1914.

	Outside the home			Inside the Home
	Factories	Other Work	Total	
Within six months before birth ..	695	81	776	1392
Within six months after birth	306	31	337	1829

Of the 776 mothers working within six months before confinement 222 were employed within three months before the birth, and of the 337 mothers working within six months after confinement 109 returned to work within three months after the birth.

The mother's health during the pregnancy was given as good in 1,835 cases, fair in 483 cases, and poor in 98 cases. The father's health was said to be good in 1,860 cases, fair in 190 cases, and poor in 54 cases ; in 67 cases of illegitimate infants the father's health was not given.

The home care of the infant was considered good in 1,835 cases, fair in 294, and poor in 41 cases. Among the infants visited 51 per cent. were living in three-roomed houses, and less than one per cent. in furnished rooms or cellar kitchens ; 89 per cent. were living in back-to-back houses.

Deaths.—Of the infants under visitation last year 423 died under one year of age, of whom 29 were illegitimate infants. Of these deaths 126 took place within the first month of life ; the following statement shows the method of feeding of the 297 infants who died within one month and one year old.

Hand fed from birth	..	..	..	..	63
Before end of 1st month	..	..	..	..	65
From one to three months old	..	..	..	..	35
From three to six months old	..	..	..	..	21
Total handfed within six months	..	..	..	..	184
Breast fed from birth to death	..	..	..	..	113

Comparing this statement with that of the feeding of the infants generally in the city it will be seen that of the infants dying within one month and one year 43·1 per cent. were hand-fed within the first month as against 12·6 per cent. of all the infants in the city.

The general care of the infant and the mother's health in the cases of the 423 infants who died can be seen in the following statement :—

	Care of infant (cases).				Mother's health (cases).	
Good	..	..	299	..	..	247
Fair	..	..	105	..	..	126
Poor	..	..	19	..	..	50

The work of the mother in these 423 cases before and after confinement is shown as follows :—

	Before confinement.				After.	
Factory	..	..	..	139	..	26
Other work outside home	..	22	..	..	..	4
Home	..	..	..	262	..	293

(C) INFANT CLINIC AND HOSPITAL.

The following table shows the number of new cases registered at the clinic and the total attendances since the institution was opened.

	No.	Total Attendances.	Average Weekly Attendances.	Average Daily Attendances.
1912	692	4607	200	40
1913	1525	19206	369	74
1914	2488	31193	600	120

The age of the infants when first seen at the clinic is shown as follows :—

AGE OF INFANT ON REGISTRATION.

	MONTHS.											
	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12
Number of Infants ...	542	795	344	214	139	120	77	71	67	43	50	26

More than two-thirds of the infants therefore when first brought to the clinic were under three months old.

1. *General Condition of Infants.* The state of the nutrition in the 2,488 infants brought last year to the consultation was classified by the medical officers there in the following manner :—Good in 1,201 or 49·3 per cent., fair in 546 or 21·9 per cent., and bad in 741 cases or 29·8 per cent.

The average weight of the children when first brought to the clinic is shown on the chart following page 74. This chart shows that the infants when brought to the clinic for the first time after $4\frac{1}{2}$ months old had generally fallen considerably below the average. The comparison of these infants with the average of 171 infants brought to the clinic regularly from their second month to the end of the year is shown on the same chart, and demonstrates the advantage of early and continuous attendance at the clinic.

2. *Method of Feeding.* The methods of feeding on registration is seen in the following table :—

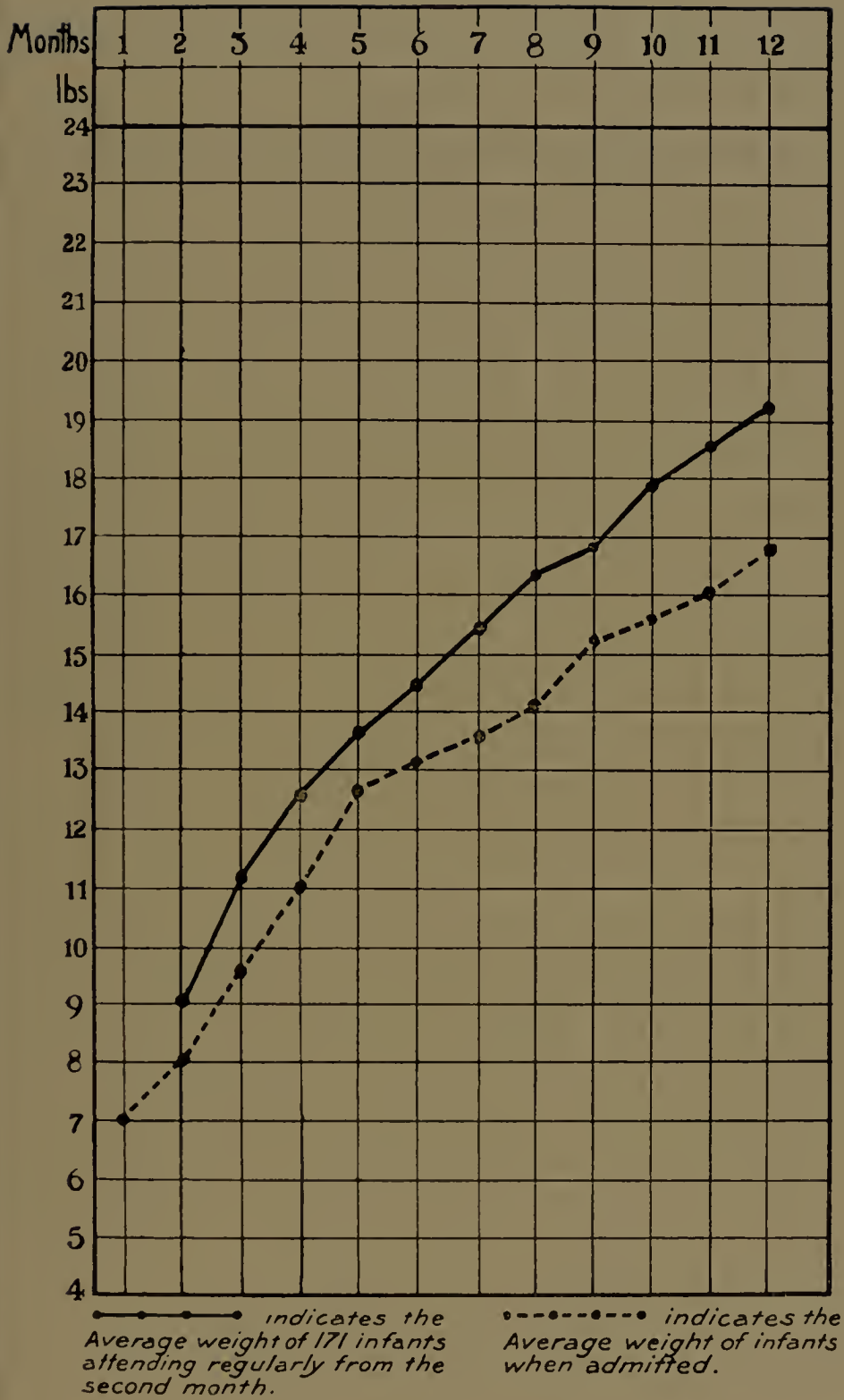
	No.	Wholly breast fed.	Wholly or partly hand fed.	Percentage hand fed.
1 month ..	542	359	183	33·8
2 " ..	795	453	342	43·0
3 " ..	344	140	204	59·3
4 " ..	214	70	144	67·3
5 " ..	139	52	87	62·6
6 " ..	120	30	90	75·0
7 " ..	77	27	50	64·9
8 " ..	71	13	58	81·7
9 " ..	67	17	50	74·6
10 " ..	43	6	37	86·0
11 " ..	50	5	45	90·0
12 " ..	26	5	21	80·8

It will therefore be seen that a very large proportion of the infants when first brought to the clinic were hand fed.

The age at which infants artificially fed before registration were reported to have become so artificially fed is as follows :—

Under one month	..	..	..	781
1-2 months	..	..	..	235
3 ,,	..	..	..	111
4 ,,	..	..	..	57
5 ,,	..	..	..	37
6 ,,	..	..	..	25
6-9 ,,	..	..	..	53
9-12 ,,	..	..	..	12

The reasons as given by the mother for resorting to artificial feeding in these infants are shown in the following table.



REASONS FOR RESORTING TO ARTIFICIAL FEEDING BEFORE ARRIVING
AT CLINIC.

Reason of Change	AGE ON REGISTRATION.								Total
	-1	-2	-3	-4	-5	-6	6-9	9-12	
A. To Breast and Hand feeding—									
Breast milk failing ..	81	136	58	51	30	21	52	39	468
Only one breast secreting ..	3	9	7	4	1	2	1	—	27
Defective nipples ..	4	2	3	2	—	—	—	—	11
Old mammary abscess	1	—	—	1	—	—	—	—	2
Mammitis	2	1	—	—	—	1	—	—	4
Child unable to suck	—	—	—	—	—	—	—	—	—
Breast milk disagreeing ..	1	—	—	—	—	—	—	—	1
Mother working ..	1	3	3	1	1	1	6	—	16
Mother ill	1	—	1	—	—	—	—	—	2
Early failing breast milk	—	—	—	—	—	—	—	4	4
B. To wholly Hand feeding—									
Breast milk failing ..	46	108	71	48	29	47	53	7	409
Defective nipples ..	9	10	4	3	1	—	—	2	29
Mother working ..	3	5	10	8	7	4	4	—	41
Mother ill	8	21	14	9	5	8	16	6	87
Child unable to suck	3	8	3	—	—	—	1	2	17
Child refused breast	3	—	—	—	3	1	2	—	9
Old mammary abscess	3	—	1	—	—	—	—	—	4
Mammitis	2	7	1	4	1	1	2	1	19
Breast milk disagreed	2	7	11	3	3	—	8	1	35
Mother deserted child	4	2	2	—	1	—	1	1	11
Child removed to hospital	1	5	3	—	—	2	3	—	14
No breast milk ever	5	18	12	10	5	2	8	5	65
Death of mother ..	—	2	—	—	—	—	1	2	5
Unknown and various	—	3	—	—	—	—	—	—	3
Early failing breast milk	—	—	—	—	—	—	—	33	33
Totals ..	183	347	204	144	87	90	158	103	1316

The kind of artificial feeding being given to the infants before being seen at the clinic is shown on the following table :—

Kind of Hand Feeding	AGE ON REGISTRATION (Months).								Total
	-1	-2	-3	-4	-5	-6	6-9	9-12	
A. Mixed Feeding—									
Breast and milk and water	63	86	35	26	16	13	13	1	253
Milk and cereal water	18	33	16	13	3	4	9	2	98
Milk and patent food	2	3	4	5	2	2	3	—	21
Milk and "pobbies"	6	13	10	12	10	5	26	1	83
Condensed milk and water	1	10	2	1	—	—	—	—	14
Condensed milk and cereal water	—	—	1	—	—	—	—	—	1
Condensed milk and "pobbies"	—	—	—	—	—	—	1	—	1
Dried milk	1	6	3	2	1	1	—	—	14
Patent food	—	—	1	—	—	—	—	—	1
Normal	—	—	—	—	—	—	7	39	46
B. Wholly Hand Fed—									
Milk and water	64	99	37	32	16	15	32	6	301
Milk and cereal water	14	54	50	23	17	24	22	6	210
Milk and patent food	2	15	13	6	8	8	13	2	67
Milk and "pobbies"	—	10	10	3	4	7	21	3	58
Condensed milk and water	4	2	9	7	4	5	4	1	36
Condensed milk and cereal water	—	—	3	2	—	—	—	—	5
Condensed milk and "pobbies"	—	4	1	1	—	3	1	1	11
Dried milk	4	7	5	10	4	2	5	2	39
Patent food	—	—	4	1	2	—	—	—	7
Normal	—	—	—	—	—	—	1	39	40
Milk and whey	1	—	—	—	—	—	—	—	1
Totals	180	342	204	144	87	89	158	103	1307

Of the 1,177 infants arriving wholly breast fed the following table shows the changes which occurred in the method of feeding with the reason of the change :—

CHANGES IN FEEDING.

Reason of Change.	AGE OF CHANGE (Months).								
	-1	-2	-3	-4	-5	-6	6-9	9-12	Total
A. Changed to Breast and Hand Feeding :									
Breast milk failing ..	64	256	127	81	56	39	63	27	713
Only one breast secreting	12	31	9	3	4	3	7	—	69
Defective nipples ..	4	4	4	2	—	—	—	—	14
Old mammary abscess	5	1	1	—	—	—	—	—	7
Mammitis	1	4	1	—	—	—	—	—	6
Child unable to suck	—	1	—	—	—	—	—	—	1
Breast milk disagreeing ..	—	1	—	—	—	—	—	—	1
Mother working ..	12	15	17	7	4	1	3	—	59
Mother ill	5	9	9	3	3	3	2	—	34
Changed by mother herself	—	9	—	—	1	1	2	—	13
B. Changed to wholly hand fed—									
Breast milk failed ..	2	4	6	—	1	—	2	7	22
Mother working ..	—	3	1	3	2	1	—	—	10
Mother ill	2	4	2	—	—	1	—	—	9
C. Under observation end of year ..	—	—	—	—	—	—	—	—	43
D. Lost sight of ..	—	—	—	—	—	—	—	—	176
Totals ..	107	342	177	99	71	49	79	34	1177

The facts recorded on this table may be considered as quite reliable as they were carefully ascertained by the medical officers personally at the Infant Clinic. The general conclusions however are the same as from the table on page 77.

The early resort to artificial feeding in such a very large proportion of the infants in Bradford is a matter of the utmost moment. It will be noticed that the reason most frequently given is the failure of breast milk, but this can hardly be considered as a satisfactory explanation, as such a failure itself does not arise without some cause immediate or remote. There can be no doubt that there is much need for careful and patient research in the physiology of human lactation which is at present only imperfectly understood. At the infant clinic a very great and increasing amount of attention has been given to the subject.

3. *Diseases and defects of infancy.* A very large proportion of the infants when first seen at the clinic presented abnormal physical conditions. The proportion of infants registered as well nourished but showing some physical defect was 28·1 per cent., the proportion badly nourished showing some physical defect was 68·4 per cent. Boys showed 11 per cent. more physical defects than girls. The diseases and defects noted on registration were as follows :—

Whooping Cough 21	Ophthalmia Neonatorum .. 10
Syphilis 121	Purulent Conjunctivitis .. 21
Rickets 80	Dacryocystitis 1
Infective Enteritis 80	Convulsions 31
Diarrhoea (non-infective) .. 195	Meningitis 2
Enteritis (non-infective) .. 24	Mental Deficiency 4
Gastro Enteritis (non-infective) 5	Congenital Paralysis .. 3
Dyspepsia and Vomiting .. 249	Skin disease 22
Chronic Peritonitis 1	Ringworm 1
Bronchitis 32	Umbilical diseases, &c. .. 70
Bronchial Catarrh 82	Hernia (umbilical) 43
Laryngismus Stridulus .. 6	Hernia (inguinal) 23
Throat and Nose 100	Hernia (femoral) 1
Adenoids 1	Congenital Heart 20

Congenital Malformations .. 21	Icterus 8
Phimosis 16	Mastitis 8
Enlarged Glands 6	Burns 1
Total ..	1309

These diseases and defects may be classified as follows :—

Whooping Cough 21	
Syphilis 121	
Rickets 80	
Diseases of the alimentary system 553	
Do. respiratory system 120	
Do. throat and nose 101	
Do. eye 32	
Do. nervous system 40	
Do. skin 23	
Umbilical diseases 70	
Hernias 67	
Congenital malformations 41	
Other diseases and defects 40	
Total 1309	

As will be seen nearly half of the infants ill on admission were suffering from diseases of the alimentary system.

During their attendance at the infant clinic a very considerable amount of illness came under observation. The cases according to the age and sex with the illness occurring is shown in the following table which shows the diseases and defects noted among the 3,033 recorded cases.

DISEASES DURING ATTENDANCE OF 3,033 INFANTS.

Disease or Defect.	AGE (IN MONTHS) AND SEX.												
	1		2-3		3-6		6-9		9-12		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Measles..	—	—	2	2	6	2	2	3	3	2	13	9	22
Whooping Cough ..	—	1	7	8	21	21	20	16	14	5	62	51	113
Other Infectious Diseases ..	—	—	—	—	4	—	3	4	—	1	7	5	12
Erysipelas and Cellulitis ..	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuberculosis ..	—	—	—	—	—	—	—	—	—	—	—	—	—
Nervous Diseases ..	1	1	11	5	13	8	5	11	5	1	35	26	61
External—Eye Diseases ..	—	1	14	7	14	16	16	12	7	4	51	40	91
Bronchitis ..	—	—	71	56	159	111	81	73	44	45	355	285	640
Pneumonia (all forms) ..	—	—	2	2	4	2	5	5	4	1	15	10	25
Diarrhœa ..	2	3	67	63	145	108	80	65	30	28	324	267	591
Enteritis ..	—	1	7	6	13	4	1	3	2	2	23	16	39
Dentition Disorders ..	—	—	—	—	7	4	20	24	26	22	53	50	103
Gastritis, &c. ..	—	—	5	3	6	9	2	1	—	—	13	13	26
Stomatitis ..	—	1	3	2	1	2	2	3	8	3	14	11	25
Syphilis ..	—	—	10	4	16	14	4	—	3	2	33	20	53
Rickets..	—	—	—	—	—	—	1	3	1	1	2	4	6
Injuries ..	—	—	1	—	1	1	4	3	3	2	9	3	12
Hernia ..	—	—	13	5	3	7	2	1	1	2	19	15	34
Diseases of the Throat and Nose ..	1	1	17	28	46	41	24	18	20	9	108	97	205
Skin Diseases ..	—	—	6	3	14	5	8	9	4	4	32	21	53
Other Diseases or Defects ..	—	—	—	—	—	1	—	—	3	—	3	1	4
	4	9	236	194	473	356	280	251	178	134	1171	944	2115

From these figures it will be appreciated that a very large part of the work of the infant clinic is of a strictly curative nature. The greatest classes of illness coming under observation here have been alimentary and respiratory disorders and the figures given show how frequent these diseases are amongst the infants of Bradford. The further steps to be taken in the prevention of these illnesses is a matter for serious consideration.

4. *Deaths among Infants attending the Clinic.* Among the deaths of infants under one year occurring in the city in 1914, there were 170 cases where the infant had attended at one time or other the infant clinic. It is not practicable to state this as a death rate as many of these infants had attended only for a very short time or very irregularly, while the fact that so large a number of infants were first brought to the clinic when ill would make such a death rate of little value. The causes of death in these cases were as follows :—

Infectious diseases	20
Tuberculosis	7
Meningitis and Convulsions	24
Diseases of the alimentary system	36
Do. respiratory system	37
Prematurity, Atrophy, Inanition, &c.	31
Congenital Specific Disease	5
Other Congenital Causes	3
Other causes	7
Total	170

(D) INFANT MORTALITY IN 1914.

It has already been noted on page 7 that there was a slight decrease in the infantile mortality rate last year. Table IV., page 196, gives in detail the diseases from which the deaths arose.

INFANTILE DEATHS IN PREVIOUS YEARS.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Zymotic diseases ..	58	57	50	45	34	71	48	23	33	68
Tuberculous diseases	27	28	26	38	28	23	14	13	28	13
Diarrhœa, &c. ..	142	216	55	162	45	96	180	25	156	88
Congenital causes..	330	315	299	364	282	277	288	256	295	234
Pulmonary diseases	151	99	146	108	95	82	91	114	96	109
Convulsions	64	92	61	55	63	58	60	69	53	79
All other causes ..	101	96	76	418	90	88	84	53	80	102
Total	873	903	713	860	637	695	765	553	741	693

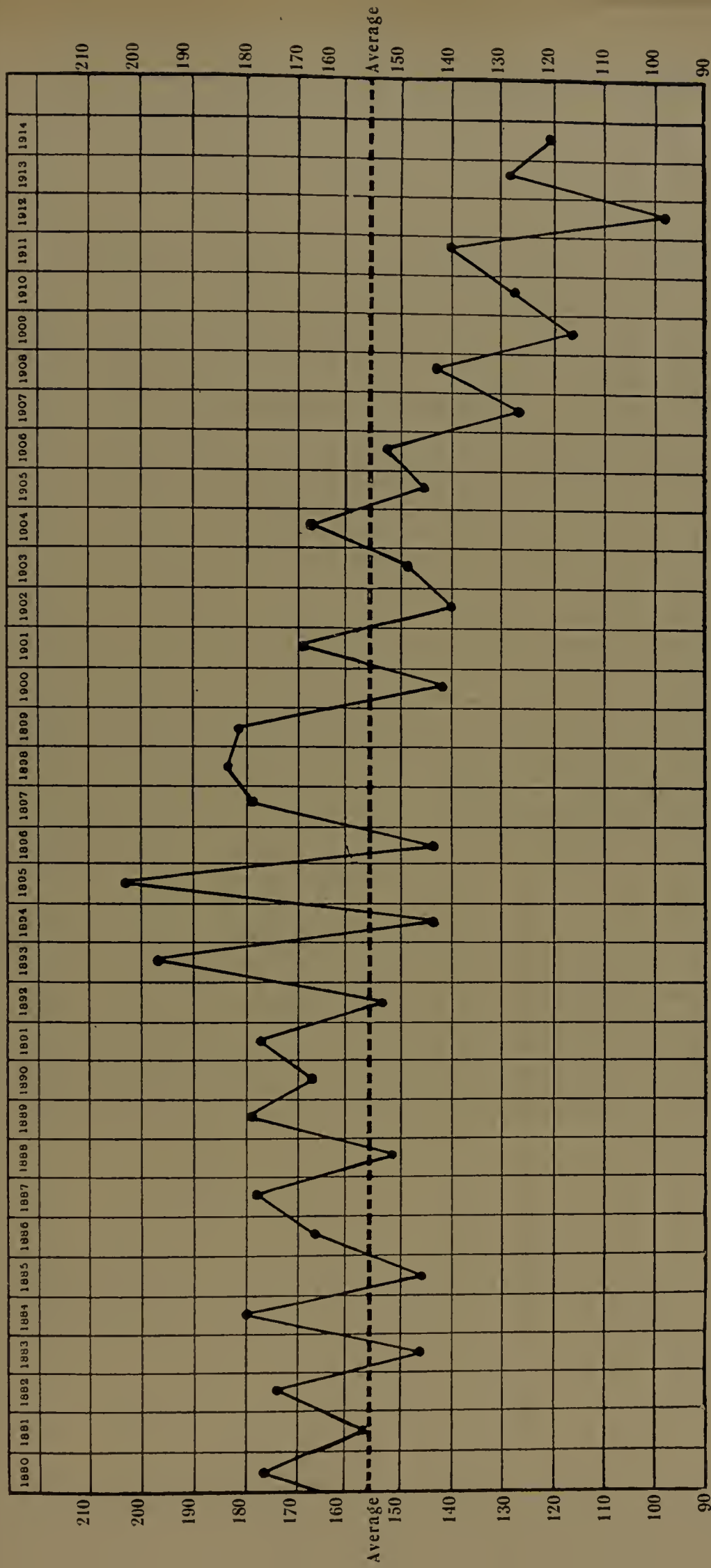
The table on page 85, and the chart following page 86, show that a continuous fall is taking place in the infantile mortality rate in Bradford. There is still, however, much room for improvement and it is hoped that the greatly increased efforts now being made will still further and more rapidly reduce the rate.

INFANT MORTALITY IN BRADFORD AND ENGLAND AND WALES
FOR EACH YEAR, AND IN GROUPS OF FIVE YEARS SINCE 1871.

BRADFORD.		ENGLAND AND WALES.		BRADFORD.		ENGLAND AND WALES.	
Average		Average		Average		Average	
1871	220	158		1896	143	148	
1872	200	150		1897	179	156	
1873	205	149	153	1898	184	160	156
1874	189	151		1899	181	163	
1875	202	158		1900	140	154	
1876	176	146		1901	168	151	
1877	157	136		1902	139	133	
1878	178	152	145	1903	148	132	138
1879	152	135		1904	167	145	
1880	176	153		1905	144	128	
1881	154	130		1906	152	132	
1882	174	141		1907	124	118	
1883	147	137	139	1908	143	120	117
1884	181	147		1909	116	109	
1885	144	138		1910	127	106	
1886	168	149		1911	140	130	
1887	179	145		1912	99	95	
1888	153	136	145	1913	128	109	
1889	181	144		1914	122	105	
1890	169	151					
1891	181	149					
1892	155	148					
1893	198	159	151				
1894	144	137					
1895	203	161					

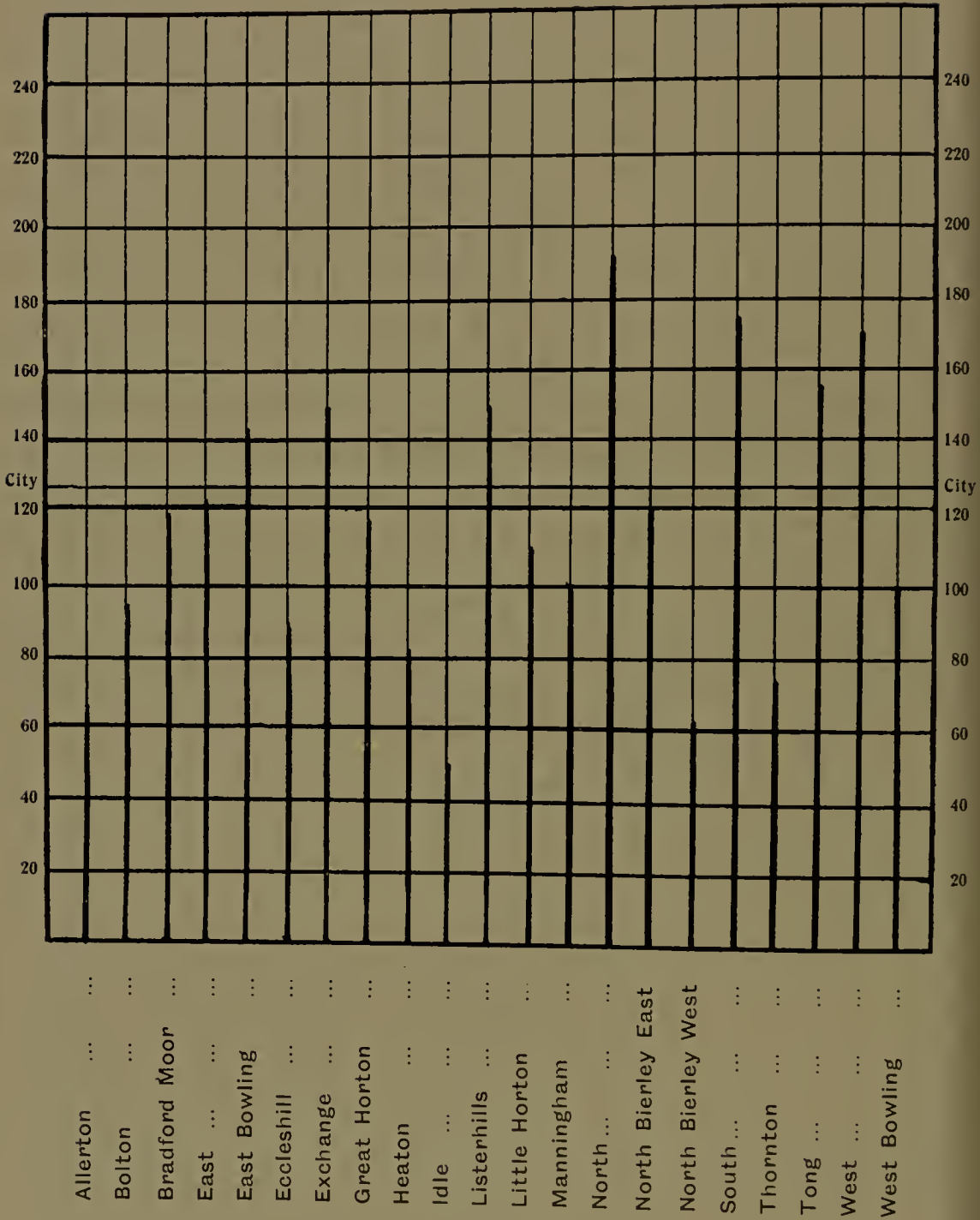
INFANT MORTALITY 1891—1914.

Year	Deaths under One Year of Age per 1000 Births.		
	Total.	Diarrhoeal Diseases.	Total less Diarrhoeal Diseases.
1891	181	14	167
1892	155	15	140
1893	198	12	186
1894	144	10	134
1895	203	52	151
1896	142	18	124
1897	179	23	156
1898	184	19	165
1899	181	22	159
1900	141	16	125
1901	168	35	133
1902	139	8	131
1903	148	19	129
1904	167	29	138
1905	144	21	123
1906	152	34	118
1907	124	11	113
1908	143	30	113
1909	116	6	110
1910	127	20	107
1911	140	32	108
1912	99	4	95
1913	128	27	101
1914	122	15	107



Average for 35 years—156

DIAGRAM SHOWING COMPARATIVELY THE INFANT MORTALITY PER
1000 BIRTHS IN THE MUNICIPAL WARDS, 1914.



The Ward record of infantile mortality is shewn on the table on page 90, and on the chart on opposite page 88, where it will be seen that this rate was highest in Exchange, North, Listerhills, West, and South Wards, and the lowest in Allerton, Idle, Thornton, North Bierley West, and Heaton Wards.

INFANT MORTALITY RATE PER 1,000 BIRTHS, IN WARDS, FOR THE
YEARS 1905 TO 1914.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Allerton	127	113	82	132	92	64	98	76	95	65
Bolton	126	112	103	95	119	63	72	70	81	96
Bradford Moor ..	126	114	141	135	132	131	152	110	149	121
East	123	120	114	161	93	92	156	99	112	126
East Bowling ..	182	179	167	149	124	144	142	117	107	143
Eccleshill	137	139	89	73	62	109	157	84	92	89
Exchange	265	239	152	312	207	230	293	185	196	149
Great Horton ..	102	100	116	108	81	131	51	76	90	118
Heaton	129	108	91	132	72	152	94	69	87	82
Idle	110	96	127	101	102	171	91	67	73	50
Listerhills	152	172	168	173	163	147	195	129	189	150
Little Horton ..	135	154	117	124	126	114	111	114	103	110
Manningham	134	171	117	146	111	141	129	70	159	97
North	216	222	176	236	100	166	230	126	194	192
North Bierley (East)	152	183	94	126	131	108	161	68	129	119
North Bierley (West)	82	98	81	90	112	75	106	144	82	62
South	148	187	127	208	165	131	194	119	185	176
Thornton	116	121	113	96	140	122	204	55	116	74
Tong	202	82	55	126	140	114	135	68	94	155
West	219	317	176	169	106	161	210	178	139	171
West Bowling ..	145	168	122	133	122	99	103	73	137	99
City	144	152	124	143	116	127	140	99	128	122

(E). OCCUPATIONS AND CHILD WELFARE.

Married Women.—Of the 59,033 women engaged in occupations outside of their homes in Bradford, 11,242, or 19.0 per cent., were married. The chief occupations of these married women were in 998 cases domestic in character, in 7509 cases in the manufacture of textile fabrics, in 662 cases in dressmaking, shirt making, &c., and in 1324 in occupations concerned with food, &c.

Of the total married women in the City (57,765) therefore, 11,242, or 19.6 per cent., were engaged in occupation, and 7509, or 13.3 per cent., were engaged in work in the mills.

Children.—The total number of children under sixteen years engaged in some occupation in Bradford was at the time of the last census, 13,779.

CHILDREN EMPLOYED.

Age	Males	Females	Total
Under 13 years ..	1210	1112	2322
14 years	1355	1341	2696
15 years	2113	2126	4239
16 years	2182	2340	4522
Total ..	6860	6919	13779

The great proportion of these children were employed in the wool and worsted trade, chiefly in the spinning processes.

CHILDREN EMPLOYED IN WOOL AND SILK TRADE.

Process		Age								Total	
		Under 13		Under 14		Under 15		Under 16			
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
WOOL AND WORSTED	Sorting ..	—	—	5	—	13	—	44	—	62	—
	Carding and Combing ..	1	3	11	8	32	24	66	57	110	92
	Spinning ..	921	1051	877	1156	524	1007	358	942	2680	4156
	Weaving ..	58	33	101	233	122	421	82	504	363	1191
	Other Processes..	9	2	45	18	69	16	92	10	215	46
SILK	Undefined ..	52	20	51	18	58	23	45	14	206	75
	Spinning ..	24	41	33	70	30	73	20	52	107	236
	Weaving ..	1	5	2	34	3	35	4	47	10	121
	Other Processes..	1	9	7	14	7	13	15	9	30	45
	Undefined ..	2	4	4	9	10	4	3	6	19	23
Total ..		1069	1168	1436	1560	868	1616	729	1641	3802	5985

Employment of Children Act, 1903. Special attention has again been paid by the Inspectors to the enforcement of the Bye-laws made under this Act for the regulation of the hours of children employed in the City. A large number of visits have been made to shops and other places where children are employed in the early morning, during the day, and at night, in all parts of the City. The provisions of the Bye-laws as they relate to the employment of children in various occupations before and after school hours, and as half-timers, have been carefully explained to all persons found to be employing children. The number of offences discovered during the year against the Bye-laws was 217 and in addition there were 11 offences against the general provisions of

the Act itself, making a total of 228, as compared with 336 in the previous year, 178 in 1912, 315 in 1911, 439 in 1910, 277 in 1909, 375 in 1908, and 724 in 1907. In twenty-four cases where the offences were repeated after warning had been given, the employers were prosecuted and the remaining employers served with warning notices and supplied with printed copies of the Bye-laws.

The following is a summary of the offences committed :—

Children employed after 9 p.m. on Saturdays ..	3
Children employed after 8 p.m. on weekdays ..	47
Children employed before and after school for more than 20 hours in a week	5
Children employed as half-timers for more than 30 hours in a week	8
Children employed under eleven years of age ..	23
Children employed the whole of the day on Saturdays	39
Children employed both morning and evening ..	27
Children employed on Sundays	14
Children employed during school meal hours ..	23
Children employed after 8 a.m. and before 5 p.m. on week-days	11
Children employed after half-time in factories ..	9
Children employed so as to be liable to cause injury to health	2
Other offences	17
Total ..	228

During the year 140 children were licensed by the Magistrates to take part in public entertainments at the various theatres and other places of amusements. Visits were made in each case to see that the

conditions of the license were carried out, and that the children were suitably cared for and educated. All the conditions were found to be satisfactory. Visits were also made to the places of entertainment at times when no licences were in operation, but no children were found to be taking part without having been licensed by the Magistrates.

The following prosecutions were undertaken under the Employment of Children Act, 1903, and Bye-laws :—

- (a) For employing children after half-time in a factory 4 persons were proceeded against and fined in all 15s. and £1 14s. costs.
- (b) For breaches of the bye-laws 20 persons were proceeded against and fined in all £2 17s. and £7 5s. costs.

V.—HOSPITALS.

In the table on page 21, of this report will be found a list of the various hospitals admitting cases from Bradford. In this part only municipal hospitals will be dealt with.

The Council possess at present two hospitals, Leeds Road Hospital and Bierley Hall Hospital, and have a right to admit patients suffering from infectious disease into three hospitals owned by the joint boards of Calverley, North Bierley, and Thornton.

The following summary shows the number and character of the case admitted to these hospitals in 1914 :—

	Leeds Road	North Bierley	Calv'ley	Thrn'ton	Bierley Hall	Total
Scarlet Fever	320	27	10	—	—	357
Diphtheria	235	11	3	3	—	252
Typhoid Fever	43	6	2	—	—	51
Erysipelas	7	—	—	—	—	7
Cerebro Spinal Fever ..	1	—	—	—	—	1
Continued Fever	1	—	—	—	—	1
Pulmonary Tuberculosis	119	—	—	—	248	248
	726	44	15	3	248	1036

(A) CITY HOSPITAL, LEEDS ROAD.

Dr. Kitchin the Medical Superintendent has prepared the following report with respect to the work done there :—

GENERAL ABSTRACT.

Remaining in Hospital, 31st December, 1913	...	...	...	78
Admitted during the year, 1914	...	...	..	635
			TOTAL	<u>713</u>
Discharged, relieved, or cured	...	...	...	591
Died	...	...	...	35
Remaining in Hospital, 31st December, 1913	...	...	...	87
			TOTAL	<u><u>713</u></u>

SCARLET FEVER.

AGE.	MALES.		FEMALES.		TOTALS.		Death Rate per Cent.
	No. Admitted.	No. Died.	No. Admitted.	No. Died.	No. Admitted.	No. Died.	
Under 1	2	...	1	...	3	...	...
1—2	5	1	1	1	6	2	33·3
2—3	12	...	5	...	17	...	...
3—4	9	1	9	...	18	1	5·5
4—5	13	...	14	3	27	3	1·1
Total under 5	41	2	30	4	71	6	8·5
5—10	64	...	63	...	127	...	...
10—15	24	...	55	...	79	...	...
15—20	6	...	12	...	18	...	...
20—25	8	...	8	...	16	...	...
25—30	...	...	6	...	6	...	...
30—35	3	...	3	...	6	...	...
35—40	...	...	...	...	...	...	...
40—45	...	...	...	...	...	...	...
TOTAL	146	2	177	4	323	6	1·8

ENTERIC FEVER.

AGE.	MALES.		FEMALES.		TOTALS.		
	No. Admitted.	No. Died.	No. Admitted.	No. Died.	No. Admitted.	No. Died.	Death- Rate Per cen
Under 5	4	...	...	...	4	...	...
5—10	3	...	3	1	6	1	16·6
10—15	3	...	...	...	3	...	...
15—20	5	...	2	...	7	...	...
20—25	3	...	...	...	3	...	...
25—30	2	1	2	...	4	1	25·0
30—35	1	...	3	...	4	...	...
35—40	2	2	4	...	6	2	33·3
40—45	...	...	1	1	1	1	100·0
45—50	1	1	...	...	1	1	100·0
50—55	1	1	...	...	1	1	100·0
TOTAL ...	25	5	15	2	40	7	17·5

DIPHTHERIA.

AGE.	MALES.		FEMALES.		TOTALS.		
	No. Admitted.	No. Died.	No. Admitted.	No. Died.	No. Admitted.	No. Died.	Death-Rate. Per cent.
Under 1	3	...	2	1	5	1	20·0
1—2	6	1	6	...	12	1	8·3
2—3	7	...	6	2	13	2	15·4
3—4	3	...	8	1	11	1	9·1
4—5	20	4	11	1	31	5	16·1
Total under 5	39	5	33	5	72	10	13·9
5—10	46	3	46	4	92	7	7·6
10—15	12	1	16	1	28	2	7·1
15—20	10	...	7	...	17	...	...
20—25	5	...	8	...	13	...	...
25—30	3	...	2	...	5	...	...
30—35	2	...	6	...	8	...	...
35—40	1	...	...	...	1	...	...
40—45	...	...	1	...	1	...	...
45—50	...	...	2	...	2	...	...
TOTAL ...	118	9	121	10	239	19	8·0

SHOWING NUMBER OF CASES ADMITTED DURING EACH MONTH
OF 1914.

1914.	Scarlet Fever.			Enteric Fever.			Diphtheria.			Other Diseases.			Total Admissions.		
Month.	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total.
January ...	6	10	16	1	1	2	20	11	31	...	2	2	27	24	51
February...	7	14	21	1	1	2	11	13	24	3	4	7	22	32	54
March ...	10	13	23	4	4	8	6	9	15	3	...	3	23	26	49
April ...	12	6	18	...	...	...	13	8	21	2	1	3	27	15	42
May... ...	8	8	16	1	...	1	7	10	17	2	2	4	18	20	38
June ...	8	12	20	...	1	1	6	8	14	...	...	...	14	21	35
July ...	8	10	18	3	...	3	3	7	10	1	1	2	15	18	33
August ...	10	8	18	4	2	6	4	3	7	...	...	...	18	13	31
September	12	15	27	2	1	3	12	7	19	...	3	3	26	26	52
October ...	29	39	68	1	1	2	15	15	30	...	...	...	45	55	100
November	26	26	52	4	3	7	8	11	19	1	1	2	39	41	80
December	14	12	26	1	4	5	15	17	32	4	3	7	34	36	70
TOTAL...	150	173	323	22	18	40	120	110	239	16	17	33	308	327	635

OTHER DISEASES.

Erysipelas	..	..	..	..	..	6
Measles	..	..	..	..	..	14
Whooping Cough, Scabies	..	..	..	..	..	1
Tonsilitis	..	..	..	..	..	3
Pneumonia	..	..	..	..	..	1
Meningitis	Pediculosis	..	..	..	..	1
Pulmonary Tuberculosis	..	..	..	..	..	1
Tabes Mesenterica	Tubercular Meningitis	..	..	..	..	1
Bulbar Paralysis	Continued Fever	..	..	..	..	1
Carbuncle	Cerebro Spinal Meningitis	..	..	..	..	1
Gangrene of Fauces	Quinsy	..	..	..	..	1
Laryngitis	..	..	..	..	..	1
Gastritis	..	..	..	..	..	1
						—
TOTAL	..	..	..	..	..	33

Of these patients three died—one from tubercular meningitis, one from cerebro spinal meningitis, and one from pleuro pneumonia.

The number of patients treated at the Special Department, Leeds Road Hospital, during the year, is as follows :—

<i>Operations.</i>	Tonsils and Adenoids	296	
	Mastoids	..	22
	Nasal Cases	..	5
	Eye Cases	..	20
			— 343
<i>Treatment.</i>	Ophthalmia Neonatorum	25	
	Keratitis	..	27
			— 52
			—
TOTAL	..	395	

SUMMARY.

YEAR.	SMALL-POX.			ENTERIC FEVER.			SCARLET FEVER.			DIPHTHERIA.			OTHER DISEASES.			TOTALS.			From 1879 to 1914.	
	Cases.	Deaths.	Death-rate per 100.	Cases.	Deaths.	Death-rate per 100.	Cases.	Deaths.	Death-rate per 100.	Cases.	Deaths.	Death-rate per 100.	Cases.	Deaths.	Death-rate per 100.	Cases.	Deaths.	Death-rate per 100.	Aggregate No. of days spent in Hospital.	Average No. of days for each Patient
1879	8	...	...	24	3	12.5	159	14	8.8	...	...	...	23	4	17.39	214	21	9.8	8,414	39
1880	2	1	50.0	60	8	13.3	248	38	15.3	...	...	...	54	7	12.9	364	54	14.8	13,192	36½
1881	21	2	9.5	61	7	11.5	317	42	13.2	...	...	...	27	...	...	426	51	11.97	16,073	37½
1882	26	3	8.8	88	17	19.3	213	31	14.5	...	...	...	39	5	12.8	366	56	15.32	14,766	40
1883	5	...	...	119	17	14.2	233	17	7.2	...	...	...	23	2	8.6	375	36	9.6	15,949	42½
1884	3	...	...	93	17	18.2	237	11	4.6	...	...	...	29	4	13.7	362	32	8.8	14,215	39½
1885	28	2	7.14	89	6	6.74	456	19	4.16	...	...	...	23	8	34.7	596	35	5.89	21,391	36
1886	4	...	...	83	8	9.63	625	29	4.64	...	...	...	14	2	14.3	726	39	5.37	29,305	40½
1887	3	...	...	79	7	8.86	830	21	2.27	...	...	...	9	5	55.5	921	33	3.58	38,609	42½
1888	16	2	12.5	57	6	10.53	283	12	4.24	...	...	...	11	1	9.9	367	21	5.72	16,479	46
1889	9	1	11.11	90	26	28.89	355	40	11.27	...	...	...	36	6	16.67	490	73	14.90	21,315	43½
1890	...	...	...	59	11	18.64	380	22	5.78	...	...	...	43	12	27.90	484	45	9.30	19,940	41½
1891	...	...	...	76	15	19.6	780	83	10.6	...	...	...	39	10	25.6	897	108	12.04	39,838	44
1892	25	4	16.6	41	11	26.8	587	27	4.6	...	...	...	32	7	21.8	685	49	7.2	29,191	42½
1893	935	100	10.6	11	4	36.3	228	17	7.8	...	...	...	12	1	8.3	1186	122	10.2	34,203	28.8

1896	...	...	...	77	15	19.4	248	14	5.6	...	...	21	6	28.5	346	35	10.1	17,368	50.1
1897	...	...	...	74	11	14.8	220	5	2.21	...	...	17	8	47.05	317	24	7.5	14,549	45.8
1898	...	...	...	162	21	12.9	556	7	1.2	...	...	42	16	38.09	760	44	5.8	35,112	46.2
1899	...	...	...	131	16	12.2	1658	74	4.4	...	...	24	11	45.8	1813	101	5.5	87,024	48
1900	...	...	...	175	38	21.7	821	42	5.1	...	...	34	6	17.6	1030	86	8.3	47,998	46.6
1901	...	...	...	137	18	13.1	573	18	3.1	...	...	36	12	33.3	746	48	6.4	33,868	45.3
1902	...	...	...	79	14	17.7	571	26	4.5	111	23	28	6	21.8	789	69	8.7	35,347	44.8
1903	...	...	...	80	13	16.25	467	19	4.06	96	22	25	6	24.0	668	60	8.9	30,193	45.1
1904	...	...	...	64	17	26.5	550	17	3.09	437	85	28	5	17.8	1079	124	11.4	44,454	41.2
1905	...	...	...	85	11	12.9	570	32	5.6	275	37	24	4	16.6	954	84	8.8	41,403	43.4
1906	...	...	...	121	20	16.52	694	22	3.17	183	14	15	6	40.0	1013	62	6.12	42,850	42.3
1907	...	...	...	50	10	20.0	374	12	3.2	141	16	13	2	15.3	578	40	6.9	23,871	41.3
1908	...	...	...	88	18	20.0	493	9	1.82	177	15	10	3	30.0	768	45	5.8	32,640	42.5
1909	...	...	...	32	5	15.62	622	13	2.09	175	24	32	8	25.0	861	50	5.8	35,559	41.3
1910	...	...	...	67	13	19.4	457	9	1.9	209	14	18	4	22.2	751	40	5.3	30,190	40.2
1911	...	...	...	93	19	20.4	367	4	1.08	271	23	29	8	27.5	760	54	7.1	33,668	44.3
1912	...	...	...	172	31	18.0	415	8	1.9	255	27	40	10	25.0	882	76	8.6	38,278	43.4
1913	...	...	...	43	6	13.9	324	6	1.8	291	34	25	7	28.0	683	53	7.7	29,095	42.6
1914	...	...	...	40	7	17.5	323	6	1.8	239	19	33	3	9.1	635	35	5.5	25,056	39.5

(B) THE CITY HOSPITAL.—BIERLEY HALL.

The Table shows the number of cases of Small-pox and other diseases isolated and treated at Bierley Hall :—

	1912	1913	1914	Total No. of days in Hospital, 1914	Average No. of days in Hospital
Small-pox	2	...	...	..	...
Convalescent Scarlatina	56	...	...	...	...
Phthisis	76	177	248	20230	81
	134	177	248	20230	81

(C) MAINTENANCE, &c.

Cost of Maintenance and Establishment Charges for the Year ended 31st March, 1915.

MAINTENANCE.

	Leeds Road £ s. d.	Bierley Hall £ s. d.
Cost of articles (food and drink), including stimulants and aerated waters	2229 4 5	1458 3 10
Cost of stimulants and aerated waters only	56 7 4	4 16 10
Cost per head of household and patients (all ages) per day, including stimulants and aerated waters ...	9·3d.	1s. 1d.
Cost per head of household and patients (all ages) per day of stimulants and aerated waters only ...	0·24d.	0·04d.

	Leeds Road.	Bierley Hall
Number of patients under 12 years of age ...	426	17
Number of patients over 12 years of age ...	181	231
Total number of patients	607	248

For the year ended March 31st, 1915, the cost of maintenance of patients admitted from Bradford to the conjoint Hospitals is as follows:—

	Half-year ended 31st March, 1915.				Half-year ended 30th Sept., 1914.			
	£	s.	d.		£	s.	d.	
North Bierley Joint Hospital...	0	16	0½	...	1	12	8	per week.
Calverley Joint Hospital ...	2	10	3	...	1	17	4	,,
Thornton Joint Hospital ...	0	16	9	...	0	15	3	,,

The following sums were paid during the year under the head of "Establishment Charges":—

North Bierley Joint Hospital ...	...	...	...	...	£810	4	2
Calverley Joint Hospital ...	...	...	...	...	562	4	5
Thornton Joint Hospital ...	...	...	...	...	277	4	0

NUMBER OF PATIENTS ADMITTED.

North Bierley Joint Hospital	{	Number of patients under 12 years ...	26
		Number of patients over 12 years ...	18
		Total number of patients ...	44
Calverley Joint Hospital ...	{	Number of patients under 12 years ...	8
		Number of patients over 12 years ...	7
		Total number of patients ...	15
Thornton Joint Hospital ...	{	Number of patients under 12 years ..	3
		Number of patients over 12 years ...	—
		Total number of patients ..	3

VI.—BACTERIOLOGICAL LABORATORY.

The total number of bacteriological examinations conducted for the local authority in 1914 was 2,376. Of these 1,370 were carried out at the Bacteriological Laboratory, and 954 by the Veterinary Inspector at the Town Hall, and 52 by the Leeds School of Medicine.

The following table shows the conditions for which these examinations were made :—

BACTERIOLOGICAL EXAMINATIONS, 1914.

Condition	Bacteriological Laboratory	Elsewhere	Total
Enteric Fever	106	—	106
Anthrax	5	—	5
Diphtheria	687	—	687
Tuberculosis :			
Sputum	505	—	505
Milk	8	896	904
Urine, &c.	19	—	19
Milk (other Organisms) ..	11	40	51
Bovine Sputum	—	70	70
Gonoëocci	15	—	15
Other Examinations ..	14	—	14
Total ..	1370	1006	2376

VII.—HOUSING.

The estimated number of inhabited houses in Bradford at the end of 1914 was 72,311. The average number of persons per inhabited house was, at the census of 1911, 4.08, as against 4.36 at the census of 1901. The number of houses overcrowded according to the standard of the census with more than two persons per room was in 1911 3,749, with a population of 26,367, of whom 8,758 were under ten years of age, living in them. The percentage of the population living in overcrowded houses was therefore 9.3.

The number of new houses built during the past ten years in each Ward and certified as fit for human habitation in accordance with the Bradford Waterworks and Improvement Act, 1871, is shown in the Table on page 108. The following statement shows the number of new buildings certified each year since 1900 as fit for human habitation.

Year.	New Buildings.	Year.	New Buildings.	Year.	New Buildings.
1900	1240	1905	1057	1910	626
1901	967	1906	655	1911	396
1902	1023	1907	637	1912	393
1903	1238	1908	486	1913	349
1904	1458	1909	476	1914	394
1900 -04	1185 (average)	1905 -09	662 (average)	1910 -14	432 (average)

It will therefore be noticed that during the past nine years there has been a serious diminution in the number of new houses being built.

NEW BUILDINGS.

Showing number of New Buildings certified as fit for habitation in each of the Wards, and in the whole City, during the years 1905-1914.

WARDS.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.
Allerton	41	14	43	35	29	62	40	21	10	13
Bolton	33	5	14	7	32	55	15	10	13	3
Bradford Moor	190	117	130	103	84	50	31	81	60	31
East	30	7	21	...	21	1	14	10	...	23
East Bowling... ..	50	14	57	38	10	3	12	39	6	3
Eccleshill	53	59	33	33	17	46	23	25	31	20
Exchange	...	...	...	...	...	...	...	...	...	2
Great Horton	110	48	48	45	30	42	37	32	58	62
Heaton	77	102	88	62	29	23	11	34	38	40
Idle	40	19	9	12	6	13	21	10	32	36
Listerhills	2	...	5	...	...	...	...	...	...	...
Little Horton	63	83	15	22	42	16	4	4	7	2
Manningham	52	13	7	...	52	88	68	42	24	37
North	23	21	8	9	18	3	20	6	2	...
North Bierley East	71	21	41	19	17	4	8	8	...	3
North Bierley West	7	1	6	...	5	44	29	20	21	48
South	8	28	23	...	15	...	...	1	1	...
Thornton	3	3	...	1	...	1	3	...	1	2
Tong	47	19	9	6	17	26	35	15	20	...
West	...	...	...	...	1	114	...	2	...	62
West Bowling	157	81	80	94	51	35	25	33	25	7
CITY TOTAL...	1057	655	637	486	476	626	396	393	349	394

(A) INSPECTION OF DWELLING HOUSES.

(By HOUSING INSPECTORS.)

The following summary shows the number of houses dealt with under the Housing, Town Planning, &c., Act, 1909, and Local Acts:—

Number of dwelling-houses inspected under and for the purpose of Section 17 of the Housing, Town Planning, &c., Act, 1909	1578
Number of dwelling-houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation	224
Number of representations made to the Local Authority with a view to the making of closing orders	224
Number of closing orders actually made by the Council ..	210
Number of dwelling-houses in regard to which representations were made under Section 17 of the Housing, Town Planning, &c., Act, 1909, and which were dealt with by the owners without a closing order being made, viz. :	
(a) Number made fit for human habitation ..	2
(b) Number closed voluntarily	12
(c) Number demolished voluntarily	9
Number of dwelling-houses in respect to which closing orders made under Section 17 were determined by the Local Authority during the year on the houses being made fit for human habitation (Section 17 (6) of the Act of 1909)	26

Number of dwelling-houses in respect of which orders for closing were made under the Bradford Corporation Gas and Improvement Act, 1871, and which were determined on the houses being made fit for human habitation	88
Number of dwelling-houses in respect of which orders for demolition were made during the year by the Local Authority (Section 18 of the Act, 1909)	38
Number of dwelling-houses demolished after service of Demolition orders	7
Number of dwelling-houses in respect of which notices were given by the Local Authority under Section 15 (3) ..	741
Number of dwelling-houses in respect of which notices were given by the Local Authority under Section 15 (3), had been complied with by the landlords to an extent accepted by the Local Authority as making the houses reasonably fit for human habitation	676
Number of dwelling-houses in which Notices were given by the Local Authority under Section 15 and which remained undisposed of at the 31st December, 1914 ..	65
Number of houses ticketed under the Bradford Corporation Act, 1913	334

The following is a report of the action taken and results effected :—

HOUSES AND LOCALITIES.	ACTION TAKEN AND RESULT.
Long Street—2, 4, 6, 8, 10, 12, 14, 16, 18 Violet Court—3 and 5 Back-to-back dwellings	Closing orders served. Converting into through houses and to be put into a thorough state of repair. Work in progress.
Long Street—20, 22, 24, 26, Violet Court—7, 9, 11, 13 Back-to-back dwellings	Closing orders served. Converting into through houses. Work in hand.
Long Street—28, 30, 32 Violet Court—15, 17, 19 Back-to-back dwellings	Closing orders served. Converting into through houses. Work in hand.
Long Street—36, 38 Violet Court—23, 25 Back-to-back dwellings	Closing and demolition orders served.
Long Street—40, 42, 44 Violet Court—27, 29, 31 Back-to-back dwellings	Closing orders served. Converting into through houses. Work in hand.
Violet Street—13, 15, 17, 19 Violet Court—2, 4, 6, 8 Back-to-back dwellings	Closing and demolition orders served.
Violet Street—21, 23 Violet Court—10, 12 Back-to-back dwellings	Closing orders served. Converting into through houses. Work in hand.
Violet Street—25, 27, 29, 31 Violet Court—14, 16, 18, 20 Back-to-back dwellings	Closing orders served. Converting into through houses and to be put in a thorough state of repair. Work in hand.
Violet Street—33, 35, 37, 39 Violet Court—22, 24, 26, 28 Back-to-back dwellings	Closing orders served. Converting into through houses. Work in hand.

Back Spinkwell Terrace—11 Basement dwelling	}	Closing order served. House permanently closed.
Black Dyke Lane—3		Closing order and demolition order served.
Burley Street—60A, 62A, 68A	}	Closing orders served. Houses have been put into a thorough state of repair.
Clarenton Lane—2, 4, 6, 8 Basement dwellings	}	Closing orders served. Houses permanently closed.
Silk Street—6A, 8A, 14A, 16A, 22A, 24A, 30A, 32A, 38A, 40A, 46A, 48A Basement dwellings	}	Closing orders served.
Lilycroft Road—88A, 90A, 92A, 94A	}	Closing orders served. Houses have been put into a thorough state of repair.
Gracechurch Street—55, 59, 133 Basement dwellings	}	Closing orders served. Houses permanently closed.
Whetley Terrace—9a	}	Closing order served. House put into a thorough state of repair.
Heaton Road—2B, 4B Basement dwellings	}	Closing orders served. Permanently closed.
Thornton Road, Thornton, 75	}	House put into a thorough state of repair voluntarily, after special interview.
Thompson Square—65, 67, 69, 73, 77, 79, 81, 83, 83A, 85, 87	}	Closing orders served.
Harewood Street—64, 66, 68, 68A		Closing orders served.
King Charles Court—6, 8, 10 Cellar dwellings	}	Closed voluntarily after special interview.
Loom Street—22A Basement dwelling	}	Closing order served. Absorbed in house above and used as wash-kitchen.

Loom Street, 26A Basement dwelling	}	Closing order served.
Wild Boar Street—1 Cellar dwelling	}	Closing order served. House permanently closed.
Wild Board Street—37 Basement dwelling	}	House put into thorough state of repair after special interview.
Hill Top Road, Thornton—102..	}	Closing order served. House put into a thorough state of repair.
Wakefield Road—114, 116, 138, 138A, 140, 142, 142A	}	Closing orders served.
Wakefield Road—442, 444, 446, 448 Back to back dwellings	}	Closing order served. Converting into through houses and put into a thorough state of repair. Work in hand.
Brownroyd Hill, Wibsey—13, 15, 17, 19, 21, 23	}	Closing orders served. Work in hand.
Frederick Street—56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80	}	Closing orders served.
Guy Street—3, 5, 7, 9 Hardy Street—53 Back-to-back dwellings	}	Demolished voluntarily after special interview with owner.
Hardy Street—45, 47, 49, 51 Back-to-back dwellings	}	Demolition orders served. Demolition in progress.
Barker Court—1, 2, 3, 5		Closing orders served.
Priestley Street—2, 4, 6 Back-to-back dwellings	}	Closing orders served.
Shaw Street—2, 4, 6, 8, 10, 12 Back-to-back dwellings	}	Closing orders served.
Nathan Street—1, 3, 5, 17 ..		Closing orders served.

Nathan Street—13, 15, 19 Basement dwellings	}	Closing orders served.
Lingard Street—16 East Street—67	}	Closing order served. Closing order served. Work in hand.
Great Cross Street—67	}	Closing order served. Work in hand.
Great Cross Street—44	}	Closing order and demolition order served.
Rooley Lane—152, 154, 160, 162, 164, 166	}	Closing orders and demolition orders served. Demolished by owner.
Rooley Lane—434	}	Closing order served. Permanently closed.
Rooley Lane—436	}	Closing order served. House put into a thorough state of repair.
Rook Lane—5	}	Closing order served. House put into a thorough state of repair.
Philadelphia Street—2, 4, 6 Back-to-back dwellings	}	Closing orders and demolition orders served. Houses permanently closed.
Sun Street—18, 22, 28 Back-to-back dwellings	}	Closing orders and demolition orders served. Houses permanently closed.
Sun Street—12, 14, 16	}	Closing orders and demolition orders served. Houses demolished.
Cross Sun Street—41, 43, 45, 47, 49, 53, 55, 57	}	Closing orders served. Houses put into a thorough state of repair.
Cross Sun Street—51, 59 Basement dwellings	}	Closing orders served. Converted into through houses and put into thorough state of repair.

Beamsley Street—1A	}	Closing order served. House permanently closed.
Back-to-back dwelling		
Leeds Road—288, 302	}	Closing orders served. Permanently closed.
Cellar dwellings		
Park Lane—205	}	Closing order and demolition order served.
Jacob Street—86, 88	}	Closing orders served. Houses put into a thorough state of repair.
Croft View—3		Closing order served.
Birch Lane—63, 65, 67, 71	}	Demolished voluntarily after special interview with owner.
Single Row—28, 30, 32, 34, 36, 38	}	Closing orders served. Work in hand.

(B) HOUSE TO HOUSE INSPECTIONS.

(BY DISTRICT SANITARY INSPECTORS.)

House to house inspections have been carried out in twenty-six streets during the year, comprising 376 houses. A summary of the streets and also the sanitary defects noted will be found below. Two cases only of overcrowding were found to exist.

ALLERTON WARD.

Crossley Hall.
Daisy Hill.
St. Leonard's Road.
Washington Street.

EAST WARD.

Park Street.

LISTERHILLS WARD.

Bright Street.
Cobden Street.
Munby Street.
Villiers Street.

LITTLE HORTON WARD.

Skinhouse Street.

EAST BOWLING WARD.

Moody Street.

Pollard Street.

MANNINGHAM WARD.

Hollings Street.

ECCLESHILL WARD.

Green Terrace.

Otley Road.

Thomas Fold.

Westgate.

NORTH WARD.

Arthur Street.

Mulberry Street.

Pine Street.

Ranter Court.

GREAT HORTON WARD.

Hunt Yard.

Pleasant Street.

NORTH BIERLEY (WEST) WARD.

Croft Row, Wibsey.

IDLE WARD.

Thorp Garth.

WEST BOWLING WARD.

Beatrice Street.

Class of House.		Total No. of Houses.	Rooms.		No. of Persons.		Average No. occupying one bedroom.
Through Vent.	Back to Back.		Living.	Bed.	Adults.	Children.	
32	344	376	383	755	986	364	1·78%

Summary of Sanitary Defects—

Houses without sinks	..	..	..	..	10
Houses overcrowded	..	..	..	..	2
Dirty houses or parts thereof	..	..	..	..	20
Houses requiring general repairs	..	..	..	..	31
Defective plaster on walls and ceilings	..	..	..	..	23
Damp houses..	..	..	..	..	14
Defective House Drainage	..	..	..	..	2

Sink waste pipes not properly trapped	..	..	2
Sink waste pipes defective	..	..	1
Sinks defective or foul	..	..	34
Filthy water closet apartments	..	..	5
Filthy privy apartments	..	..	1
Eaves spouts or down spouts defective	..	..	26
House roofs defective	..	..	30
Choked drains	..	..	6
General repairs to water closets	..	..	12
Dangerous places	..	..	2
Windows not made to open	..	..	12
Foul walls around house sinks	..	..	53
Accumulation of refuse	..	..	1
Defective ashpit doors	..	..	23

VIII.—FOOD.

(A) MILK SUPPLY.

So far as can be estimated it would appear that the average quantity of milk consumed in the city daily amounts to about 14,500 gallons, of which about 9,000 gallons is produced within the city boundaries and about 5,500 gallons outside.

Inspection of Dairy Cattle. This is carried out regularly by the veterinary inspector who supplies the following report on his work during the year.

REPORT BY C. PITTS, M.R.C.V.S.

FARMS. There are at present within the city 400 farms of which 327 are used as dairy farms, and 73 chiefly for rearing or keeping store cattle. All the farms were visited under the provisions of the Tuberculosis Order 1913, and the amended order 1914.

COWSHEDS. A great many cowsheds have been reconstructed and their sanitary arrangements have been very much improved. Many new cowsheds have been constructed and where possible every effort was exerted to obtain the maximum amount of sunlight in mid-winter by placing windows on the south side, and having cattle facing north. Unfortunately there are still a few cowsheds each containing two rows of dairy cows arranged head to head—conditions which are bad—but under our present regulations we are unable to deal with them.

DAIRY COWS. There are approximately 4,600 dairy cows within the city which contribute to the milk supply. The class of dairy cattle during the year has been excellent, and farmers do not now purchase dairy cattle with defective udders as was formerly the case.

DAIRY INSPECTION. During the year 2,549 visits were made to dairy farms to inspect cowsheds, dairies, and canhouses with regard to their sanitary conditions and cleanliness; milk vessels were particularly examined and owners are advised to thoroughly scald or sterilize them to destroy germ life, which cause the souring of milk. Pastures were also inspected in the summer months to ascertain if cesspools exist, or are in such conditions that dairy cattle may contaminate their limbs or udders allowing filth to adhere to these parts which may fall into milk vessels during the operation of milking.

DAIRY ANIMALS INSPECTION. In addition to inspection of cowsheds, pasture, dairies, canhouses, milk vessels, and general conditions, 29,085 inspections of dairy animals were made during the year, attention being paid to the general health, and more particularly the udders and the milk, and all suspicious looking animals. Cattle were also inspected with regard to their cleanliness, feeding and general management and in cases of poor samples of genuine milk owners were advised as to the best methods to adopt.

MILK SAMPLES COLLECTED AND EXAMINED. Milk samples were collected for examination from all thin dairy animals having an unthrifty appearance, from all animals having any part of the udder enlarged or indurated, and from all dairy animals which had recently calved. The number of samples so taken in 1914 was 844. They were examined by microscope for pus, dirt, and tubercle bacilli.

In twenty-two samples tubercle bacilli were found ; in some other cases where there was doubt as to the wholesomeness of the milk repeated samples were taken and examined until all doubt was removed, the animal meantime being kept apart and the milk not used raw.

Many samples of milk when taken direct from the udder appeared normal, but when allowed to stand at rest in a test tube for a short time a deposit of pus cells was found at the bottom. In these cases, the owners were notified not to sell or mix and sell milk containing pus cells for human food. After this notice the inspector of food and drugs intercepts the dairyman in his delivery of the milk and purchases samples, which were examined particularly for pus cells. The result of this examination determined further action.

During the year two samples of mixed milk from sources beyond the city boundaries were found to contain tubercle bacilli. One farm was visited and the dairy cattle examined and a sample of milk taken from a diseased udder for biological examination. The milk was also examined microscopically, and was found to contain tubercle bacilli, and the District Council and owner were notified the same day. In the second farm which was visited all the dairy animals were examined and 36 samples of milk were collected and examined microscopically but no tubercle bacilli were found. The owner stated that one dairy animal had been sold prior to our visit. A mixed milk was taken from this farm for biological testing for tubercle bacilli but was found negative.

POWERS TO DEAL WITH MILK. Under the Tuberculosis Order 1913 and the amended order 1914 if milk was found to contain tubercle bacilli from a tuberculous udder the diseased animal was at once slaughtered, thus getting rid of the source of infected milk at once. Under No. 16 of the Regulations with respect to Dairies, Cowsheds, and Milkshops, powers are given against contaminations. Every purveyor of milk or person selling milk by retail, shall exercise due diligence to prevent the exposure of milk belonging to him, or in his charge, to any noxious emanation or uncleanness ; or to any article, animal, or thing liable to communicate infection or to contaminate the milk. Limited powers are given under the Bradford Corporation Act, 1900, to prevent milk being sold for human consumption from a dairy animal suffering from tuberculosis of the udder, also to compel owners to notify to the Medical Officer of Health suspected cases, also to isolate the animal.

OTHER MICROSCOPIC EXAMINATIONS. Seventy specimens of mucus which had been expelled by coughing were collected and examined by the microscope. Thirty-six were found to contain large numbers of tubercle bacilli, these specimens show the great danger of infection to other animals in the same shed, especially when the cattle are arranged in two rows facing each other, and where animals suffering from pulmonary tuberculosis may cough and expel large quantities of mucus or phlegm, heavily charged with tubercle bacilli, on to animals standing in front of them, and also contaminate large areas with tuberculous material.

POWERS TO DEAL WITH CATTLE EXPELLING TUBERCULOUS MATERIAL. Where discharges containing tubercle bacilli were found on different parts of the interior of a cowshed deposited there by animals suffering from Pulmonary Tuberculosis, power was given to deal with the animal when detected under the amended order of the Tuberculosis Order which took effect June 23rd, 1914, and was suspended August 6th, of the same year.

During the year fifty dairy animals were found to be suffering from tuberculosis; from January to August forty-five were found, from August to December after the suspension of the Tuberculosis Order only five animals were dealt with. Sixteen were found to be suffering from tuberculosis of the udder, fifteen of these were found in the city by microscopic examination of the milk, and one was found outside the city, a mixed milk having been reported to contain tubercle bacilli. Thirty-four suffering from tuberculosis not affected in the udder were also found in the city sheds.

These were disposed of as follows:—Forty-four were totally destroyed; four others were slaughtered and passed for human food after diseased parts had been removed; one was dealt with in an area outside the city; and one was sold to a dealer and lost sight of after the suspension of the Tuberculosis Order.

One animal was notified under the Tuberculosis Order, but after examining no further action was taken.

POWERS TO DEAL WITH DAIRY ANIMALS SUFFERING FROM TUBERCULOSIS OF THE UDDER. The Tuberculosis Orders 1913 and 1914 were most effective in dealing with animals suffering from tuberculosis of the

udder and the amended order which came into operation in June, 1914, was much more effective, as this order removed all bovine animals suffering from open tuberculosis. After the suspension of this order resource was had to the Local Act which gives power to impose a penalty on a person selling milk from an animal suffering from tuberculosis of the udder, also to compel owners to notify to the Medical Officer of Health animals suffering from suspected tuberculosis of the udder. Under the same act powers are given to compel isolation of the diseased animal, but not to cause them to be removed from the farms or slaughtered. Such animals remaining on farms are a source of danger, and until the secretions of milk were entirely suspended there was always a doubt where the milk from a diseased udder went to. The weakness of the position is shown by the fact that owners of dairy animals suffering from tuberculosis of the udder are at liberty to dispose of them without restrictions and many have been sent away giving milk to the extent of $2\frac{1}{2}$ gallons per day, and some sold to dealers outside the city boundary and lost sight of.

POWERS TO DEAL WITH TUBERCULOUS DAIRY ANIMALS NOT AFFECTED IN THE UDDER. Dairy animals affected with pulmonary tuberculosis standing in a cowshed with other animals are without doubt a great source of infection to other animals, and to the contamination of milk during milking. These animals cough and expel tuberculous mucus contaminating large areas, also the cowshed utensils, tubercle bacilli may be spread and so perpetuate a disease which is so ruinous to the stock owners as well as a great danger to the public consuming milk and meat. The only power to deal with this class of animal were embodied in the Tuberculosis Order of 1914, but unfortunately this is suspended, but in order to deal effectively with tuberculosis in dairy cattle such a power is an absolute necessity. In dealing with the fifty cases of bovine animals suffering from tuberculosis in the year 1914, the compensation paid by the Local Authority of the City of Bradford was only £4 7s. 9d. or less than 1s. 9d. per head.

SUMMARY OF INSPECTIONS AND WORK DONE.

400 Farms.

327 Dairy Farms.

4,600 Dairy Animals (approx.)

2,549 Visits to Farms.

- 4,881 Inspections of Cowsheds.
- 29,085 Inspections of Dairy Cattle.
- 844 Samples of milk. Twenty-two contained tubercle bacilli, in some cases two or more quarters were affected.
- 70 Specimens of mucus expelled by coughing collected and examined, 36 contained tubercle bacilli.
- 40 Bottles of milk which had been purchased from dairymen during delivery from farms where defective udders were found. On examination these were found to be free from pus.
- 50 Dairy animals were found to be suffering from tuberculosis :
 - 16 affected with tuberculosis of the udder.
 - 34 not affected with tuberculosis of the udder.
- 1 Reported under the Tuberculosis Order 1913, but no further action was taken.
- 50 Dairy Animals suffering from tuberculosis were disposed of as follows :—
 - 44 totally destroyed.
 - 4 passed for human food after diseased parts were removed.
 - 1 found outside the city was dealt with by the Local Authority of the District.
 - 1 sold to a dealer after the suspension of the Tuberculosis Order and lost sight of.

Cowsheds. There were at the end of the year within the city 288 dairy farms, containing 496 cowsheds, which are regularly under inspection for the enforcement of regulations made under the Dairies, Cowsheds, and Milkshops Orders, 1885 and 1886. During the past year 2,298 visits have been made to these premises, and 3,708 inspections of cowsheds.

Twenty-three notices were served upon cowkeepers requiring them to carry out certain alterations or repairs necessary to put the cowsheds in their occupation in a sanitary condition.

Considerable improvement has been effected in the sanitary condition of these places during the past five years, and the work executed during the past twelve months at various farm premises is given below.

Cowsheds Reconstructed	13
Feeding Gangways Provided	15
Additional Light Secured	21
Proper Ventilation Provided	22
Additional Air Space	21
Drains Relaid or New Drainage Provided	22
Paving (repaired or renewed)	21
New Manure Pits Constructed	4
Manure Pit Reconstructed	1
Manure Pits (ventilating into Cowsheds) Abolished	5
Walls Smoothed to facilitate cleansing	22
New Dairies Provided	2
Cowsheds Abolished	5

The whole of these improvements were personally supervised by the Inspector of Cowsheds. Changes in the occupancy of farm premises are constantly taking place, and during the past twelve months nineteen persons have been registered as cowkeepers. During the past year the occupiers of thirty-six farms have discontinued keeping dairy cows.

Four plans were submitted to the Health Committee of cowshed alterations at farm premises and approved.

The following notices were served in respect of cowsheds :—

Dirty condition of Cowsheds and Dairy Cows ..	30
To remove Manure	2
Manure Tank overflowing	3
To limewash Cowsheds	21
To remove Swine from Cowshed	1
Total	57

Owing to the continued filthy condition of the cowsheds and cattle legal proceedings were taken against a cowkeeper, who was fined the maximum penalty, £5 and costs.

Samples of the water supply of nine farms were obtained and submitted for analysis. In two cases the samples contained lead and one was polluted with sewage, the remainder were certified as fit for domestic use. In the case of the polluted samples action was taken to ensure a pure supply.

The practice of the Inspector visiting dairy farms during milking times has been continued with good results. If the methods of handling the milk is unsatisfactory some of the milk is filtered in the presence of the farmer and his assistants and the residues shown to them. Such a demonstration has had a markedly good effect and very rarely has a second warning been necessary.

SUMMARY OF WORK CARRIED OUT AT FARM PREMISES.

Name of Farm.	Lighting.	Ventilation.	Air Space.	Drainage.	Walls.	Paving.	Reconstructed.	Gangway.	Manure Pits Abolished.	Manure Pits Provided.	Dairies.	Cowshed Closed.	Manure Pits Reconstructed.
Phyche Nook Farm, Heaton	1	1	1	1	1	1	1	1	1	1	—	1	—
Moscow Farm, Thorn'n.	—	—	—	—	—	—	—	—	—	—	—	1	—
Cote Farm, Thackley..	2	2	2	2	2	2	2	2	1	—	—	—	—
Bierley House Farm, Bierley	3	3	3	3	3	3	1	2	—	—	—	—	—
Cheesecake Farm, Bierley	1	1	1	1	1	1	1	1	—	—	—	—	—
Denby Farm, Allerton	1	1	2	2	2	—	—	—	1	1	—	—	—
Far Hill Farm, Wibsey	1	1	1	1	1	1	1	1	—	—	—	—	—
Hargreaves Farm, Tong	—	—	—	—	—	—	—	—	—	—	—	1	—
South View Farm, Bolton	1	1	1	1	1	1	—	—	—	—	—	—	—
Yew House Farm, Thornton	1	1	1	1	1	1	1	1	—	—	—	—	—
All Alone Farm, Idle..	—	1	—	—	—	1	—	1	—	—	—	—	—
Clock House Farm, Manningham ..	1	1	1	1	1	1	1	1	1	1	—	—	—
Hedge End Farm, Buttershaw ..	1	1	1	1	1	1	1	1	—	—	—	—	—
Moorside Road Farm, Fagley	1	1	1	1	—	1	—	—	—	—	—	—	—
Seed Farm, Low Moor	—	—	—	1	1	1	—	—	—	—	—	—	—
Holme Bank Farm, Tong	2	2	2	2	2	2	—	—	—	—	1	—	—
Crossley Hall Farm ..	—	—	—	—	—	—	—	—	—	—	—	1	—
Dene Lane Head Farm, Allerton	1	1	—	—	1	—	—	—	—	—	1	—	—
Hedge House Farm, Allerton	1	1	1	1	1	1	1	1	—	—	—	—	1
Street Gap Farm, Allerton	—	—	—	—	—	—	—	—	—	—	—	1	—
Carr House Farm, Low Moor	1	1	1	1	1	1	1	1	—	—	—	—	—
Cold Harbour Farm, Wibsey	1	1	1	1	1	1	1	1	1	1	—	—	—
Yew Tree Farm, Allerton	—	1	1	1	1	1	1	1	—	—	—	—	—
TOTALS ..	21	22	21	22	22	21	13	15	5	4	2	5	1

Milkshops, Dairies, and Purveyors of Milk. There were at the end of the year 408 vendors of milk registered and residing within the City. During the year forty new milk purveyors were registered.

These registered milk vendors may be classified as follows :—

Cowkeepers and retailers		135
Retailers only (in the streets or from their homes)		158
Milkshops (including dairies, confectioners, small grocers, restaurants, and other shops)	..	115

The number of visits made during the year to these premises was 830, and generally the premises were found in a fairly satisfactory state.

In addition to these 408 vendors residing in Bradford, 54 dairy-men came in from surrounding districts to sell milk, by retail, in the City.

Two milk purveyors were cautioned for selling milk from receptacles not conspicuously inscribed with their name and address. Each of them afterwards complied with the requirements.

The milk supply produced within the City is supplemented from 197 sources outside the boundary. From these sources the milk arrives in Bradford in 101 cases by rail, in 9 by tramways, and in 87 by road. The total amount of milk produced outside the City boundary and consumed within is estimated to be about 5,200 gallons daily.

Bacteriological Examination of Milk. In addition to the examinations of milk carried out by the Veterinary Inspector, fifty-two samples of milk were obtained and submitted to the Leeds School of Medicine

to be tested for tubercle bacilli by inoculation tests ; three of these were reported to be tuberculous. The following details may be given with respect to the samples proving tuberculous :—

One sample (No. 225) was from a mixed milk coming from outside the City by rail, and taken at the station on its arrival. The cowshed was visited by the Veterinary Inspector, and the cows examined, but no suspicious udder was found. Several weeks had elapsed between the taking of the sample and the receipt of the report, and during that period three cows had been sold to butchers. A further sample of mixed milk was taken at the cowshed, and proved to be not tuberculous.

One sample (No. 260) was from a mixed milk coming by road from outside the City. The cowshed was visited and the cows examined, but no suspicious udder was found. In this case two cows had been sold to butchers between the taking of the sample and the receipt of the report. A further sample of mixed milk from the whole of the cows was taken, and proved to be negative.

One sample (No. 263) was from a mixed milk coming by road from outside the City. The cowshed was visited, and two samples were taken from suspected udders under the direction of the Veterinary Inspector. One of the samples (No. 272) was reported as tuberculous. The cow was afterwards sold at the Bingley Auction Mart, bought by a butcher, slaughtered at Keighley, and condemned by the Inspector there.

No Bacteriological counts of milk were done during the year.

Fifty-two samples of milk were obtained in the streets to be examined for pus.

Chemical Examination of Milk. During the year 477 samples of milk were analysed by the City Analyst and the results are shown in tabular form on the following page. These show that 2·3 per cent. of the samples gave an analysis under 3 per cent. of fat, and 70·2 per cent. over 3·5 per cent. of fat, while 5·0 per cent. of these samples gave an analysis under 8·5 per cent. of non-fatty solids, and 54·1 per cent. over 9 per cent. non-fatty solids. The total number below 3·0 per cent. of fat and 8·5 per cent. non-fatty solids was 35, or 7·3 per cent. of the samples.

Per cent.	Fat																	Total						
	Und'r 2'5	2'5	2'6	2'7	2'8	2'9	3'0	3'1	3'2	3'3	3'4	3'5	3'6	3'7	3'8	3'9	4'0		4'1	4'2	4'3	4'4	4'5	4'6 & over
Under 7'5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Over 7'5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7'6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7'7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7'8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7'9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8'0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8'1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8'2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8'3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8'4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8'5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8'6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8'7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8'8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8'9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9'0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9'1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9'2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9'3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9'4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9'5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9'6 and over	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ..	1	2	1	4	2	1	21	16	22	25	47	39	54	38	39	36	30	30	20	13	7	10	19	477

Non-Fatty Solids.

Municipal Milk Depot. The business done at the Milk Depot is shown in the following tabular statement :—

	1912-13	1913-14	1914-15
Humanized Milk sold (bottles)	119,539	5,875	571
Sterilized Milk sold (pints)	70,907	14,543	8,410
Raw Milk sold, wholesale and retail (galls.)	81,327	101,156	176,989
Sterilized Milk supplied to Hospitals (pints)	22,416	436	Nil
Raw Milk supplied to Hospitals (galls.) ..	9,255	5,225	18,160

The Balance Sheet for the year ending March 31st, 1915, is appended.

COMPARATIVE STATEMENT OF REVENUE

EXPENDITURE.	1913-14.		1914-15.		Increase.	Decrease.
	Amount.	Per-centage of Total Income.	Amount.	Per-centage of Total Income.		
	£ s. d.		£ s. d.		£ s. d.	£ s. d.
Salaries of Officials ...	120 8 8	1'92	127 8 9	1'14	7 0 1	
Wages and Team Labour	768 7 10	12'29	1410 19 6	12'63	642 11 8	
Rents, Rates, and Taxes	85 10 8	1'36	160 18 0	1'44	75 7 4	
Milk and Cream ...	4287 1 0	68'56	8345 9 5	74'72	4058 8 5	
Sugar	2 4 8	'03	0 0 4			2 4
Eggs	141 19 9	2'27	6 12 9	'05		135 7
General Repairs ...	483 6 6	7'73	471 15 0	4'22		11 11
Painting	...	...	60 0 0	'54	60 0 0	
Bottles, Teats, Washers, } &c. }	55 15 3	'90	256 14 5	2'30	200 19 2	
Clothing	23 16 1	'38	39 18 2	'36	16 2 1	
Coal, Coke, Gas, Elec- } tricity, and Water }	92 3 0	1'47	333 19 4	2'99	241 16 4	
Provender, Saddlery } and Farriery... }	141 5 6	2'26	158 19 9	1'42	17 14 3	
Agency Charges ...	81 18 4	1'31	224 12 8	2'01	142 14 4	
Insurance	2 4 5	'04	8 16 8	'08	6 12 3	
Printing, &c., Disburse- } ments and Sundries }	104 6 10	1'67	158 5 7	1'42	53 18 9	
					5523 4 8	149 2 1
					149 2 10	
	6390 8 6	102'19	11764 10 4	105'32		
INCREASED EXPENDITURE					£ 5374 1 10	

F. OGDEN WHITELEY, F.S.A.A.,

City Treasurer and Accountant

* NOTE.—In addition to the above, expenditure has been incurred in respect of the New Premises in Morley Street, as follows:—

	£	s.	d.
Second Instalment	2500	0	0
Interest on Suspense Account...	310	0	0
	<u>£2810</u>	<u>0</u>	<u>0</u>

MILK DEPOT.

ACCOUNTS FOR THE YEARS 1913-14 AND 1914-15.

INCOME.	1913-14.		1914-15.		Increase.	Decrease.
	Amount.	Per-centage of Total Expend-iture.	Amount.	Per-centage of Total Expend-iture.		
	£ s. d.		£ s. d.			£ s. d.
Milk—Humanized ...	11 10 3	17	1 16 9	01		9 13 6
„ Sterilized ...	139 2 5	218	64 5 1	54		74 17 4
„ Wholesale ...	2681 15 5	4198	4408 6 4	3747	1726 10 11	
cream	38 3 0	60	140 11 10	119	102 8 10	
eggs	61 11 0	96	4 18 8	04		56 12 4
butter	11 4 5	17				11 4 5
bottles, Teats, &c. ...	1 10 0	02	7 13 8	06	6 3 8	
Free Supply—						
Health Dept.—Milk ...	569 4 6	890	1392 4 11	1183	823 0 5	
Infants' Con- } sultations } do. ...	2636 6 9	4126	5149 4 10	4376	2512 18 1	
Do. Eggs ...	103 3 10	162	1 2 0	01		102 1 10
	6253 11 7	9786	11170 4 1	9494	5171 1 11	254 9 5
					254 9 5	
					4916 12 6	
Expenditure in excess of Income	136 16 11		*594 6 3			
	6390 8 6		11764 10 4			
INCREASED INCOME					£ 4916 12 6	

MEM. —	£ s. d.
Deficit, 1913-14	136 16 11
Increased Expenditure, 1914-15.....	5374 1 10
„ Income, 1914-15	4916 12 6
	457 9 4
	£594 6 3

(B) SALE OF FOOD AND DRUGS ACTS.

The number of samples of Food and Drugs taken under these Acts and submitted to the Public Analyst for analysis by the Food and Drugs Inspector was 932. Of these 804 were certified genuine and 128 as adulterated or doubtful.

In eighteen cases the vendors were summoned before the Magistrates for adulteration of food, one for exposing margarine not labelled as required by the Margarine Act, 1887, and one for selling margarine in an unmarked wrapper. Penalties and costs amounting to £23 2s. were inflicted.

Under special arrangement thirty-two samples were submitted by traders and others for analysis; of these twenty-eight were certified genuine and four adulterated.

The following table shows the nature of articles submitted for analysis :—

SAMPLES TAKEN.

	Number submitted	Adulterated or Doubtful
Milk	484	33
Cream	17	2
Butter	68	1
Cheese	8	—
Bread and Butter ..	9	—
Margarine	10	—
Lard	46	—
Flour	76	66
Rice	12	3
Pepper ..	12	—
Jam	7	2
Coffee	9	2
Other Articles of Food	97	16
Drugs	77	3
Total ..	932	128

The action taken is set out in the following table and text.

MILK.

Sample No.	Deficiency in Fat, per cent.	Added Water, per cent.	Other Adulteration	Fine	Costs	Remarks
6121	16.7	4.4	—	£ s. d. —	£ s. d. 0 7 0	
6126	—	8.9	—	—	0 7 0	
6130	—	10.0	—	—	0 7 0	
6605	—	5.1	—	1 10 0	0 7 0	
6648	—	9.9	—	3 0 0	0 7 0	
6652	—	8.0	—	2 0 0	0 7 0	Skimmed milk. Second offence.
6792	—	3.3	—	0 10 0	0 19 6	
6879	—	13.0	—	1 0 0	0 7 0	
6890	—	—	60 parts per million of fluid dirt	2 0 0	0 7 0	

NOTES:—Samples 6121, 6126, 6130, were from the same cowkeeper who resides outside the City, and were preceded by 2 unofficial samples containing 10.8% and 9.4% of added water.

The view the Magistrates took was that the defendant had been the victim of circumstances, and that probably some malicious person had interfered with the milk. Defendant was ordered to pay costs only.

In the following cases the sample was either taken unofficially or a caution was given by the Committee, viz. :—

Samples shewing 18.7, 8.0, 7.0, and 6.0 per cent. deficiency in fat ; samples shewing 8.0, 3.3, 2.47, 2.3, 1.9, 1.4, 1.17, 0.8, 0.77, 0.7, 0.58, 0.58, 0.47, and 0.23 per cent. of added water ; sample shewing 4.12 per cent. deficiency in fat and 2.6 per cent. added water.

There were no cases where preservative was found in milk.

There were seven samples of separated milk taken ; one of these contained 13 per cent. of added water, which on legal proceedings being taken resulted in a penalty of £1 and 7s. costs being imposed, while another which contained 8 per cent. of added water, on prosecution resulted in a penalty of £2 and 7s. costs.

Cream. Seventeen samples were taken, and two samples reported against under the Milk and Cream Regulations. The proprietor of the Café from which these were taken was cautioned.

Flour. Seventy-six samples were submitted for analysis. Sixty-six contained nitrites (expressed as sodium nitrite) varying from 1.05 to 4.20 parts per million of flour.

Seventy of the samples were taken in connection with two experiments to determine the absorption from or the formation of nitrites in flour exposed to the atmosphere in Bradford.

Forty of the samples were a series of four flours, each of which was divided into ten portions. Nine of these portions were exposed to the atmosphere in the month of February for periods varying from one to sixteen days. The first portion of the flour was examined for nitrites (expressed as sodium nitrite) in parts per million without exposure to the atmosphere, and the remaining nine portions after being exposed. The following table gives the number of days of exposure and the nitrites in parts per million found in each sample (expressed as Na. NO_2).

No. of days exposure.	No. 1 Flour		No. 2 Flour		No. 3 Flour		No. 4 Flour	
	Na. NO_2 in parts per million.		Na. NO_2 in parts per million.		Na. NO_2 in parts per million.		Na. NO_2 in parts per million.	
	Ratio.		Ratio.		Ratio.		Ratio.	
None	..	1.26 100.0	..	2.42 100.0	..	2.62 100.0	..	1.36 100.0
1	..	1.57 124.0	..	3.15 130.2	..	3.05 116.4	..	1.57 115.4
3	..	1.36 108.0	..	3.04 125.6	..	2.94 112.2	..	1.78 131.0
5	..	1.15 90.8	..	2.84 117.3	..	2.41 92.0	..	1.68 123.0
7	..	0.84 66.6	..	2.52 104.1	..	2.62 100.0	..	2.31 170.0
9	..	0.73 58.0	..	2.42 100.0	..	2.94 112.0	..	2.10 154.0
10	..	1.36 108.0	..	2.62 108.3	..	2.31 88.0	..	2.62 192.0
12	..	1.36 108.0	..	3.36 138.8	..	3.36 128.0	..	2.84 208.0
14	..	1.68 133.0	..	3.46 143.0	..	3.57 136.0	..	3.25 239.0
16	..	1.57 124.0	..	3.46 143.0	..	4.20 160.0	..	3.67 270.0

A further series of three samples of flour were divided into ten portions each, nine of which were exposed to the atmosphere during the month of June for periods varying from one to ten days. The

atmosphere also was tested for nitrates and nitrites during each exposure of the flour. The following table gives the number of days of exposure of the flour, the nitrites (expressed as sodium nitrite) in parts per million found in each sample, and also the result of the air test for nitrates and nitrites.

No. of Days Exposure	No. 1 Flour Na NO ₂ in parts per million.		No. 2 Flour Na NO ₂ in parts per million.		No. 3 Flour Na NO ₂ in parts per million.		Cubic feet of air passed through a solution during exposure of Flour.	Nitrates found in solution.	Nitrites found in solution.
	Ratio		Ratio		Ratio				
None	0.73	100.0	0.63	100.0	0.84	100.0	—	—	—
1	1.05	143.0	1.05	166.0	1.15	137.0	2.67	None	None
2	1.26	172.0	0.84	133.0	1.26	150.0	2.83	„	„
3	1.45	198.0	1.55	246.0	1.26	150.0	2.54	„	„
4	1.47	201.0	1.65	262.0	1.68	200.0	3.04	„	„
6	1.36	187.0	1.57	250.0	1.57	187.0	2.34	„	„
7	1.78	243.0	1.57	250.0	1.57	187.0	3.00	„	„
8	1.78	243.0	1.68	266.0	1.68	200.0	3.27	.0104	„
9	1.78	243.0	1.68	266.0	1.68	200.0	4.28	.0104	„
10	0.52	72.0	0.525	83.0	0.52	63.0	3.01	.0070	„

From these two experiments it will be seen that flour exposed to the atmosphere does generally show some increase in the amount of nitrites present according to the length of time of exposure. There are however certain startling exceptions which make it impossible to accept this as a general rule. The amount of nitrites present in flour exposed to the atmosphere appears to be governed by some other factors at present not ascertained.

Butter. Sixty-eight samples were taken, and one sample was reported against for containing 0.9 per cent. excess of water.

Rice. Twelve samples were taken, and three samples were reported against as follows:—Two unofficial samples contained 0.26 and 0.10 per cent. respectively excess of extraneous mineral matter. These were followed by official samples, one of which was genuine, and the other contained 0.12 per cent. excess. Proceedings were instituted, but afterwards withdrawn.

Malt Vinegar. Seven samples were taken, five of which were found to contain respectively 75, 75, 77, 78, and 80 per cent. of vinegar made from other material than malt or malted grain.

Proceedings were instituted in every case. In the first a warranty was produced and accepted by the Court, but owing to the time limit (six months) were unable to take proceedings for false warranty. In the second case the retailer was fined £1 and 7s. costs. In the third £2 and 9s. costs. The fourth and fifth cases were withdrawn.

Coffee. Nine samples were taken, and two were reported against as follows:—One unofficial sample contained 44 per cent. of chicory, and was followed by an official sample from the same shop which contained 38 per cent. of chicory. The vendor was proceeded against and fined £2 and 9s. costs.

Jam. Seven samples were taken, and two found to contain .52 and .50 grains per lb. respectively of salicylic acid.

Ground Ginger. Five samples were taken, and one was found to contain 8.6 per cent. of total mineral matter; this was reported as doubtful.

Dried Apricots. Four samples were taken, and all were reported against as follows:—They contained respectively 5.42, 7.98, 8.12, and 15.22 grains per lb. of sulphur dioxide.

Whisky. Seven samples were taken, and one was found to contain 4·5 per cent. excess of water (28·42 U.P.) The vendor was proceeded against, and ordered to pay the costs, 5s.

Sausage. Five samples were taken, and one was found to contain 0·35 per cent. of boric acid per lb. Further samples were taken, and the quantity of boric acid was materially reduced and the samples reported genuine.

Baking Powder. Seven samples were taken, and two unofficial samples were reported as containing 14 and 17·5 parts per million of lead respectively.

Wine. Three samples were taken, and two found to contain 2·85 and 0·79 grains per lb. of salicylic acid.

Other Foods. The following are the samples of other foods taken and certified genuine :—

Condensed Milk	4	Bread & Butter	9	Margarine	..	10
Cheese	..	8	Lard	..	..	46
Sugar	..	..	2	Nutmeg	..	1
Pepper	..	12	Crushed Wheat	1	Oatmeal	..
Tea	..	..	1	Cocoa	..	5
Potted Meat	..	3	Pearl Barley	1	Sago	..
Ground Almonds	2	Arrowroot	..	1	Beer	..
Tinned Soup	..	2				

DRUGS.

Resin Ointment. Two samples were taken, and both were reported against as follows :—

Each consisted of 91·5 per cent. of paraffins, substances not present in the official article, and they also contained only five instead of 26·7 per cent. of resin.

Each sample was free from bees-wax and lard, substances specified in the British Pharmacopœia.

The vendor was proceeded against and fined 10s. and 17s. 6d. costs.

Tincture of Myrrh. One sample was taken and reported as containing $68\frac{1}{4}$ per cent. of the minimum amount of Extract of Myrrh. The vendor was cautioned.

Other Drugs. The following are the samples of other drugs taken and certified genuine :—

Salicylic Acid .. 2	Chlorate of Potash 2	Camphorated Oil 2
Comp. Liq. Powder 4	Gregory Powder 4	Glycerine .. 3
Cod Liver Oil .. 2	Olive Oil .. 5	Milk of Sulphur.. 2
Amm.Tinct. Quinine 1	Seidlitz Powder 2	Tinc. of Iodine .. 3
Citric Acid .. 6	Soap Liniment .. 2	Tartaric Acid .. 4
Cream of Tartar 6	Spt. of Sal. Volatile 3	Castor Oil .. 2
Citrate of Magnesia 1	Zinc Ointment .. 2	Borax 1
Boracic Acid .. 1	Boracic Ointment 1	Flowers of Sulp'r. 1
Lime Water (Med.) 1	Salts of Tartar .. 1	Acetate of Potash 1
Citrate of Potash 1	Salicylate of Soda 1	Permanganate Pot. 1
Gentian Root .. 1	Phenacetin .. 2	Bromide of Potas. 1
Sprt. of Turpentine 2		

(C) PUBLIC HEALTH (MILK & CREAM) REGULATIONS, 1912.

The following statement shows the work done :—

(1) *Milk and Cream not Sold as Preserved Cream—*

	No. of Samples examined for the presence of preservatives.				No. of samples in which preservatives was reported to be present.		
Milk	484	..	..	..	—		
Cream	—	..	..	..	—		

(2) *Cream Sold as Preserved Cream*—

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct.

(i.) Correct statements made	..	..	..	17
(ii.) Statements incorrect	..	..	..	—

No. of Sample.	Percentage of Boric Acid indicated on the Statutory Label		Percentage of Boric Acid found in the Cream.		Percentage of Fat present in the Cream.		Where Purchased.
6188	..	0.5	..	0.35	..	42.2	Dairy
6189	..	0.5	..	0.52	..	48.2	„
6190	..	0.5	..	0.46	..	45.3	„
6191	..	0.5	..	0.19	..	44.8	„
6235	..	0.5	..	0.30	..	41.5	„
6345	..	0.5	..	0.25	..	54.9	„
6346	..	0.5	..	0.20	..	53.5	„
6347	..	0.5	..	0.23	..	50.0	„
6380	..	0.5	..	0.20	..	57.5	Restaurant
6382	..	0.5	..	0.30	..	46.6	„
6383	..	0.5	..	0.27	..	49.4	„
6384	..	0.5	..	0.23	..	32.5	„
6385	..	0.5	..	0.25	..	25.5	„
6386	..	0.5	..	0.36	..	42.5	„
6391	..	0.5	..	0.28	..	35.4	„
6392	..	0.5	..	0.38	..	49.6	„
6746	..	0.5	..	0.34	..	46.5	Dairy

(b) Determinations made of milk fat in cream sold as preserved cream.

(i.) Above 35 per cent.	..	..	..	15
(ii.) Below 35 per cent.	..	..	..	2
				—
Total	..	..	..	17

Samples Nos. 6384 and 6385 as given above. Both these samples were the same cream as No. 6386, which had been diluted with milk prior to being taken on to the tea table. The proprietor was cautioned.

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V. (1) and the proviso in Article V. (2) of the Regulations have not been observed.

Found three restaurants with a small room where notification was not given. This was remedied on attention being drawn to the requirements.

(d) Thickening substances :—None.

(D) SLAUGHTERHOUSES AND MEAT INSPECTION.

There are in Bradford two public slaughterhouses, 42 private slaughterhouses, and one knacker's yard. The private slaughterhouses are in 10 cases registered slaughterhouses, and in 32 cases subject to annual license. The knacker's yard is a licensed slaughterhouse.

Two meat Inspectors are engaged whole time in the work of meat and slaughterhouse inspection. The inspectors visit several times daily the public abattoirs so that all meat prepared there for sale is subjected to inspection. The number of visits to private slaughterhouses made last year was over 2,000, or an average of rather over one to each per week. Generally the private slaughterhouses have been found clean and satisfactory, but the work of maintaining an effective supervision of private slaughterhouses is laborious and unsatisfactory.

The number of carcasses condemned wholly or partly during the year was 1,262. These were as follows :—

CARCASES WHOLLY OR PARTLY CONDEMNED.

	Wholly	Partly	Total
Cows	96	420	516
Heifers	9	102	111
Bullocks	3	31	34
Calves	54	22	76
Sheep	53	59	112
Pigs	195	218	413
Total	410	852	1262

The total weight of meat found unwholesome or unsound and destroyed was as follows :—

WEIGHT IN LBS.

Beef	56,673
Veal	3,144
Mutton	3,570
Pork	32,760
Offal	29,192
Total	125,339lbs.
55 Tons, 19 cwts., 19 lbs.	

The total number of animals slaughtered in the Public Abattoirs is as follows :—

	St. James's	Bolton Lane	Total
Beasts ..	14465	1983	16448
Sheep ..	24331	6017	30348
Lambs ..	3520	1202	4722
Calves ..	3562	1285	4847
Pigs ..	11976	5372	17348
	57854	15859	73713

Of these animals 509 beasts and 197 pigs were found Tuberculous. The extent and incidence of the disease is shown in the following table :—

TUBERCULOUS CARCASSES AT PUBLIC ABATTOIRS.

	Beasts		Pigs	
	No.	Per cent.	No.	Per cent.
Wholly destroyed	77	0.46	81	0.46
Partially destroyed	37	0.022	18	0.10
Internal organs only destroyed	395	2.40	98	0.56
Total	509	3.08	197	1.12

The meat sold in the markets and shops has been under frequent inspection, and the meat at the Fever Hospital, Union, and School Canteen, has been examined periodically and found according to contract. During the year 836 visits were made by the Inspectors on Sunday morning to butchers' shops open on that day, but no unsaleable meat was discovered. The number of premises in the City where sausages and potted meat are prepared is 249, and 3,400 visits of inspection were paid to them during 1914; they were generally found satisfactory.

There has been one seizure of meat during the year, viz. :—504 lbs. of meat in pickle, which was found in a putrid condition in a cellar attached to the shop of a meat purveyor in the City. The meat was condemned, and after a Justices Order had been obtained it was destroyed. A letter of censure was sent to the offender by the Town Clerk, acting upon instructions from the Health Committee.

(E) OTHER ARTICLES OF FOOD.

One special Inspector is employed in the inspection of fish, game, poultry, fruit, and vegetables. The Inspector visits daily St. James's Wholesale Market and Rawson Place Retail Market. During the year he paid 861 visits to retail fish, game, and poultry dealers' premises. The total quantity of fish, game, poultry, fruit, and vegetables found unsound during 1914 and destroyed amounted to $55\frac{1}{2}$ tons, as much of this had originally been sound and had merely decayed with keeping, a lamentable waste of food is here represented. Seventy-five applications were entered on the books at the Markets requesting inspection of food stuffs. The goods in each case were found unfit for food, and were surrendered to the Inspector to be destroyed.

Two seizures were made from wholesale merchants of rabbits and strawberries respectively. Proceedings were taken against the offenders, and convictions were recorded in both cases, penalties amounting to £8 17s. being inflicted.

A street hawker was found in possession of 248 lbs. of unsound strawberries, which were seized. Police Court proceedings followed, and the hawker was fined £1 7s.

Three retail fish, game, poultry, and fruit dealers were found exposing for sale unsound food stuffs, which were seized and destroyed. The Police Court proceedings which followed resulted in one case being dismissed, and a conviction being obtained in the remaining two cases. Penalties amounting to £4 14s. being inflicted.

Shell Fish. In normal times the quantity of cockles and mussels disposed of in the City Markets amounts to not less than 15 tons per week, the proportion being 10 tons of mussels, 5 tons of cockles.

It should be remembered that a very large area outside the City is supplied from the Bradford Markets.

Bradford receives the greater part of its supplies from the Lancashire coast, viz. :—Morecambe, Heysham, Bolton-le-Sands, Ulverston, Cark, Baicliffe, Piel, Fleetwood, Southport, Lytham, and occasional supplies from Boston, Leuchars (Scotland), Galway and Killarglin (Ireland), Harlingen, Hull (Dutch), Holland.

In consequence of an outbreak of Typhoid Fever in a neighbouring town, alleged to be due to the consumption of mussels purchased by a hawker from a salesman in St. James's Market, several samples of shell fish were submitted to the City Bacteriologist for examination.

No difficulty was experienced in tracing the alleged polluted mussels, which were received from Galway (Ireland), and were part of a consignment of 13 cwt., 11 of which were sold to Bradford retailers without an outbreak of Typhoid Fever resulting. A second consignment of 10 cwt. was received by the same salesman, and were all sold

within the City without any injurious results accruing. A sample from the second consignment was obtained and submitted to the City Bacteriologist for examination. His report showed them to be absolutely clean and free from any contamination. The evidence in support of the allegation was of a very doubtful character and investigation showed that there was no good ground for making the statement as no case of typhoid fever occurred in Bradford from this cause, although 21 cwts. out of 23 cwts. suspected were consumed here. The appearance of allegations of this description in the public press is much to be deprecated.

RESULTS OF THE BACTERIOLOGICAL EXAMINATION OF SHELLFISH.

No. of Sample.	Source of Sample.	Nature of Shellfish.	Date Received in Market.	Date when Sample was taken.	Date of issue of Certificate.	RESULTS.			
						Bac. Coli.	Streptococcus.	Enteritidis.	Typhoid.
1	Ulverston	Mussels	Jan. 21st	8.35 a.m. Jan. 21st	Feb. 2nd	+			—
2	Morecambe	do.	Jan. 21st	8.35 a.m. Jan. 21st	Feb. 2nd	—			—
3	Galway (Ireland)	do.	Jan. 21st	8.35 a.m. Jan. 21st	Feb. 2nd	—			—
4	Morecambe	do.	Jan. 21st	9.0 a.m. Jan. 21st	Feb. 2nd	+			—
5	Morecambe	do.	Jan. 21st	9.10 a.m. Jan. 21st	Feb. 2nd	+			—
6	Lytham	Cockles	Feb. 11th	8.20 a.m. Feb. 11th	Feb. 16th	+	—	—	—
7	Boston	Mussels	Feb. 11th	8.30 a.m. Feb. 11th	Feb. 16th	—	—	—	—
8	Fleetwood	do.	Feb. 11th	8.35 a.m. Feb. 11th	Feb. 16th	+	—	—	—
9	Southport	Cockles	Mar. 2nd	8.5 a.m. Mar. 2nd	Mar. 13th	+	—	+	—
10	Boston	do.	Mar. 2nd	8.5 a.m. Mar. 2nd	Mar. 13th	—	—	+	—
11	Glasson Dock	Mussels	Mar. 2nd	8.30 a.m. Mar. 2nd	Mar. 13th	+	—	—	—
12	Boston	do.	Mar. 3rd	8.30 a.m. Mar. 3rd	Mar. 13th	+	—	—	—
13	Morecambe	do.	Mar. 3rd	8.40 a.m. Mar. 3rd	Mar. 13th	+	—	+	—
14	Heysham	do.	Mar. 3rd	8.45 a.m. Mar. 3rd	Mar. 13th)	+	—	+	—
15	Leuchars	Cockles	Mar. 9th	8.10 a.m. Mar. 9th	Mar. 17th	+	+	—	—

Fried Fish Shops. At the close of the year there were 317 fried fish shops in the City, 119 houses and shops, and 118 lock-up shops. Seven hundred and twenty-five visits have been made to these places by the Inspector.

Fish frying having been scheduled as an offensive trade has had a beneficial effect, the standard of cleanliness being much higher, and greater care is now being taken both in the preparation and storage of food stuffs. Seventy-five fish friers have had their frying ranges re-built, or so altered as to comply with the Offensive Trades Bye-laws, with the object of mitigating as far as possible the nuisance caused by escaping steam and vapour. There were two seizures of unsound fish from fish friers' premises. Proceedings were taken against both offenders, who were convicted, and fines amounting to £1 17s. were imposed. One seizure was made on a Sunday night.

The following reports were made to the Committee of the bad circumstances under which fish frying is sometimes carried on.

The Inspector on a visit to a fish frier's shop found the same in a disgustingly dirty condition. On the counter and on the table was some fish in a filthy condition, and there were laid on the table several pieces of cooked fish. In two earthenware vessels was a quantity of foul smelling batter. From the different colours of the batter adhering to the sides of the vessels it was evident that they had not been washed out for some time. The interior of the vessels had the appearance of being lined with putty, the inside coating being fully $\frac{1}{4}$ in. thick and quite hard. The receptacle known as the "warmer," which is made of copper, was green with verdigris all over, both inside and out owing to lack of cleansing. There was a leakage in the warmer, and quite green fat had dripped on the floor. Both floor and range were incredibly dirty, and there was a most foul smell in the shop. The kitchen was also very dirty. The proprietor had been cautioned for similar condition six months before.

At another fried fish shop the Inspector found the room at the rear, where fish and potatoes are prepared and stored, in a very filthy condition, the floor, walls, and slop sink being badly fouled with fish slime and scales, and the room was in a foul smelling condition for lack of cleansing. The walls were disgustingly dirty. This man had been previously cautioned about having dirty premises.

Twelve summonses were issued against fish friers for breaches of the Offensive Trades Bye-laws. Two were dismissed, and the remaining ten were convicted, penalties amounting to £6 15s. being inflicted.

A case occurred in which the owner of a fried fish shop failed to comply with a notice to abate certain nuisances existing on his premises. Proceedings were taken against him, and an Order obtained for the nuisances to be abated within fourteen days, and costs amounting to 13s. against the defendant. Failing to obey the Order of the Court he was fined £5, after which he carried out the necessary work.

Ice Cream Makers' Premises. During the year 715 visits were made to Ice Cream Makers' premises.

There is a steady improvement noticeable in the way in which the Italian Ice Cream manufacturers are carrying on this business. Paper Hall Court, Paper Hall Square, King Charles Court, and the immediate neighbourhood, are most unsuitable districts in which to carry on the manufacture and storage of ice cream. The position of the sanitary conveniences stand in blocks in the middle of the Court, and during the summer months the Courts literally swarm with flies. Great difficulty is experienced in properly supervising this trade, as during the course of the year so many people commence the business and others give it up, while again large numbers manufacture ice cream only at week ends. The only measure by which this difficulty can be overcome is to introduce registration of every person before giving them permission to commence the trade.

Ten summonses were issued against Ice Cream manufacturers for breaches of the Ice Cream Regulations. One was withdrawn, and in the other nine cases convictions were recorded, and penalties amounting to £7 5s. were obtained.

American Gooseberry Mildew. During the year 5,221 lbs. of gooseberries were seized by the Inspector, these being affected with American Gooseberry Mildew.

Proceedings were instituted against four fruit merchants and six fruit growers under the American Gooseberry Mildew Order, 1914. Three cases were dismissed, one withdrawn, and six convictions were obtained, penalties and costs amounting to £28 7s. being inflicted.

This disease seems to be spreading very rapidly. Consignments from France and Holland have been found in the Market badly effected by the disease. In fact so rapid is the spread of the disease that if not checked it promises to destroy an important rural industry. This would appear to be the reason why the Board of Agriculture have asked for the assistance and co-operation of the different Local Authorities to help to stamp out the disease.

Fish Curing Premises. Two hundred and eleven visits have been made to these places in the City, and on each occasion they were found clean and in all respects satisfactory.

Articles of Food Surrendered. The following is a summary of the articles of food examined by the Inspector and found unfit for human consumption :—

SHELL FISH.					Tons.	Cwts.	Qrs.	Lbs.
Cockles	..	..	27 bags	..	1	14	0	0
Mussels	..	..	14 bags	..	1	0	0	0
Oysters	..	..	1 barrel	..	0	1	0	0
					2	15	0	0

DRY FISH.

				Tons.	Cwts.	Qrs.	Lbs.
Shrimps	..	..	..	0	1	2	14
Norwegian prawns	38	tins	..	0	4	3	0
Norwegian sardines	1,000	tins	..	0	2	2	0
Kippers	..	75	boxes	0	9	1	4
Finnon haddock	..	..	..	0	2	2	14
Finnon codlings	..	..	..	0	1	0	0
Finnon fillets	..	..	..	0	1	3	7
				1	2	3	11

WET FISH.

Herrings	..	10	boxes	..	0	10	0	0
Mackerel	..	28	boxes	..	1	8	0	0
Smelts	..	56	boxes	..	0	3	2	0
Cod fish	..	..	..	..	0	1	2	7
Haddock	..	..	..	..	0	19	2	0
Hake	..	..	..	..	0	6	1	0
Codlings	..	..	..	..	0	3	0	0
Conger eel	..	..	..	..	0	1	2	0
Salmon	..	..	..	..	0	0	3	20
				3	14	0	27	

VEGETABLES.

Cabbages	..	86 bags & hampers	0	18	0	0	
Cauliflowers	..	38 crates	..	1	8	0	0
Parsley	..	32 hampers	..	0	4	0	0
Lettuce	..	206 hampers and					
		crates	..	1	9	1	0
Watercress	..	3 hampers	..	0	2	1	0
Carrots	..	55 bags	..	1	13	3	0

			Tons.	Cwts.	Qrs.	Lbs.
Potatoes	..	15 barrels	.. 0	16	3	14
Radishes	..	14 hampers	.. 0	9	0	0
Peas	..	176 hampers	.. 3	18	0	0
Kidney beans	..	211 bags	.. 4	10	1	0
Brussels sprouts		140 bags	.. 3	4	1	0
			18	13	2	14

FRUIT.

Apples	..	75 barrels and boxes	.. 0	0	0	3784
Pears	..	107 do.	.. 0	0	0	4578
Gooseberries	..	435 bags	.. 0	0	0	18218
Strawberries	..	536 baskets	.. 0	0	0	5236
Cherries	..	126 do.	.. 0	0	0	4714
Plums	..	147 do.	.. 0	0	0	3710
Raspberries	..	58 do.	.. 0	0	0	232
Red Currants	..	18 do.	.. 0	0	0	263
Blackberries	..	44 do.	.. 0	0	0	364
Peaches	..	7 do.	.. 0	0	0	147
Black Currants	..	3 do.	.. 0	0	0	12
Mushrooms	..	5 do.	.. 0	0	0	60
Cucumbers	..	5 do.	.. 0	0	0	6
Bananas	..	14 crates	.. 0	0	0	1568
			19	2	3	24

POULTRY, GAME AND RABBITS.

Ptarmigan	..	40	..	..	0	0	0	20
Chickens	..	23	..	..	0	0	2	13
Hares	..	4	..	..	0	0	0	16

					Tons.	Cwts.	Qrs.	Lbs.
Curlews	16	..	..	..	0	0	0	12
Pigeons	4	..	..	..	0	0	0	2
Snipe	1	}	..	..	0	0	0	1
Plover	1							
Ducks	12	..	..	..	0	0	1	8
Partridges ..	4	..	..	..	0	0	0	2
Turkeys	1020	..	..	..	4	10	3	4
					4	14	0	22
Rabbits	2495	..	..	..	2	15	3	0

AMOUNT OF FOOD STUFFS SEIZED.

Rabbits	36	..	..	..	0	0	3	6
Pieces of fish ..	91	..	..	..	0	0	1	24
Vegetables	..	..	..	..	0	0	1	7
Strawberries ..	..	..	..	..	0	3	0	0
Gooseberries (under the American Gooseberry M. O.) ..		..	..	..	2	5	3	14
					2	10	1	23

No. of case.	Nature of goods seized.	Action taken.	Penalties and costs. £ s. d.	Remarks.
1	27 rabbits	Prosecution	3 7 0	
2	3 rabbits	do.	0 3 0	Proceedings taken under P.H.A.A. 1890.
3	3 rabbits	do.	—	Same defendant as Case 1. Ordered to pay costs.
4	71 pieces of fish. ..	do.	1 0 0	Withdrawn.
5	3 rabbits	do.	2 7 0	A fish fryer.
6	8½ lb. smoked fillets ..	do.	2 7 0	Previously convicted.
7	1 lb. smoked fillet ..	do.	—	Withdrawn. Same defendant as Case 6.
8	25 cabbages and 5 cucumbers	do.	—	Dismissed. Defendants—a Co-operative Society. A very bad case.
9	248 lb. strawberries ..	do.	1 7 0	A street hawk.
10	248 lb. strawberries ..	do.	5 7 0	Proceedings taken under P.H.A.A. 1890.
11	21 pieces of fish ..	do.	0 17 0	A fish fryer.
Total			£16 15 0	

PROSECUTIONS FOR BREACHES OF THE ICE CREAM REGULATIONS.

157

No. of Case.	Offence.	Action taken.	Penalties and Costs. £ s. d.	Remarks.
1	Exposing Ice Cream to contamination ..	Prosecution	0 17 0	
2	Do.	do.	0 17 0	One previously convicted for similar offence.
3	Do.	do.	0 17 0	Do.
4	Do.	do.	2 7 0	One defendant. Fined maximum penalty in the first case, and ordered to pay costs in the other two cases.
5	Do.	do.	0 3 0	
6	Do.	do.	0 3 0	
7	Do.	do.	0 12 0	
8	Do.	do.	—	Withdrawn.
9	Failing to have name inserted on cart ..	do.	0 12 0	
10	Do.	do.	0 17 0	
			£7 5 0	

PROSECUTIONS FOR BREACHES OF THE OFFENSIVE TRADES BYE-LAWS.

158

No. of case.	Trade.	Offence.	Action taken.	Penalties and costs. £ s. d.	Remarks.
1	Fish Frier	Failing to cleanse utensils ..	Prosecution	0 12 0	A disgusting case.
2	do.	Failing to remove unsound fish	do.	—	Dismissed.
3	do.	Failing to cleanse premises ..	do.	0 17 0	
4	do.	Failing to limewash ..	do.	0 17 0	
5	do.	Failing to limewash ..	do.	0 17 0	
6	do.	Failing to cleanse cellar ..	do.	—	Dismissed.
7	do.	Failing to cleanse cellar ..	do.	0 12 0	
8	do.	Failing to limewash ..	do.	0 12 0	
9	do.	Failing to provide receptacles ..	do.	0 12 0	
10	do.	Failing to remove refuse ..	do.	0 12 0	
11	do.	Failing to cleanse cellar ..	do.	0 12 0	
12	do.	Failing to remove refuse ..	do.	0 12 0	
13	do.	Failing to comply with notice to abate nuisance ..	do.	0 13 0	Ordered to pay costs and abate within 14 days.
14	do.	Failing to comply with order ..	do.	5 0 0	Same defendant as No. 13.
				£12 8 0	

No. of Case.	Offence.	Action taken.	Penalties and costs. £ s. d.	Remarks.
1	Exposing for sale diseased gooseberries through his Agent	Prosecution		Dismissed. A fruit grower.
2	Exposing diseased gooseberries for sale	do.	--	
3	Do. do.	do.	—	Both cases dismissed. Both the defendants swore the gooseberries were not exposed for sale although part of the consignment had been sold.
4	Exposing for sale 1,168lbs. of diseased gooseberries	do.	2 9 0	
5	1,120lbs. of gooseberries	do.	—	Withdrawn. Same defendant as No. 4.
6	Exposing for sale 168lbs. of diseased gooseberries	do.	1 7 0	
7	Selling 168lbs. of diseased gooseberries	do.	1 9 0	
8	Causing to be sold by his Agent 168lbs. of diseased gooseberries	do.	10 14 0	
9	Causing the exposure for sale by his Agent of 200lbs. of diseased gooseberries	do.	1 14 0	
10	Causing the exposure for sale by his Agent 150lbs. of diseased gooseberries	do.	10 14 0	
Total ..			£28 7 0	

SUMMARY OF POLICE COURT PROCEEDINGS.

Prosecutions	45
Dismissed	6
Withdrawn	4
Convictions	35
Penalties	£64 15 0

IX. WORKSHOP AND SHOP INSPECTION, &c.

(A) FACTORY AND WORKSHOP ACT, 1901.

Inspections. The total number of workshops on the register is now 2,365. and of bakehouses 478, as compared with 2,439, and 483 respectively last year.

Two Inspectors are engaged almost wholly on workshop and shop inspection and they are assisted by one of the women inspectors and by the district sanitary inspectors.

	Workshops	Bakehouses
Visits made by the Shop Inspectors	2372	1076
„ „ Women Health Inspectors ..	1360	—
„ „ Sanitary Inspectors	495	—
Total	4227	1076

Special attention is paid to the cleanliness, ventilation, air space, closet accommodation, and general sanitary condition of these places, as required by the Public Health Acts and Factory and Workshop Acts.

Failing to Keep List of Outworkers. Forty-eight employers were found who had failed to keep on their premises a list showing the names and addresses of all persons employed by them outside such premises as required by the Factory and Workshop Act, 1901. In each case the offender was warned.

Notification of Outworkers Employed. Two hundred and four employers who had failed to send in on the 1st of February and the 1st of August a list of outworkers employed by them as required by the Factory and Workshop Act, 1901, were warned, and your Committee allowed one month's grace to enable them to comply with the necessary requirements, as a result of which two hundred lists were duly received within that period. In the remaining four instances the employers were prosecuted, the total penalties of £3 10s. and £2 costs being imposed.

Sanitary Defects in Workshops, &c. The following is a summary of the sanitary and other defects found to exist in workshops, workplaces, and bakehouses. With slight exceptions the defects have all been remedied. During the year the Factory Inspectors—both male and female—in pursuance of Sec. 5 of the Factory and Workshop Act, 1901, have made 72 complaints in writing to the Town Clerk, relative to the sanitary condition of factories and workshops in the City. The Inspectors investigated the complaints, and where necessary caused statutory notices to be served for the various breaches of the Act. At the close of the year the requirements of nearly all the notices had been complied with.

Particulars.	No. of cases.
Workshops without abstract of the Factory and Workshop Act (notified to H.M. Inspector of Factories).. ..	86
Other reports to H.M. Inspector of Factories	7
Dirty workshops limewashed and cleansed	231
Dirty bakehouses limewashed and cleansed	150
Workshops with separate closet accommodation for sexes	14
Workshops with insufficient closet accommodation ..	13
Workshops with foul or defective w.c.'s or privies ..	91
Workshops where additional ventilation was required ..	36
Workshops which were overcrowded	4
Gas stoves without provision for carrying off fumes ..	14
Baking underground without certificate	1
Various other nuisances remedied	106
Total ..	753

In the official tables on pages 163-166 will be found a statement of the work done under the Factory and Workshop Act, 1901. No outwork was found done in unwholesome premises (sec. 108) or in infected premises (secs. 109 and 110).

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES AND HOMEWORK.

I.—INSPECTION.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR
INSPECTORS OF NUISANCES.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
FACTORIES (Including Factory Laundries)	340	71	—
WORKSHOPS (Including Workshop Laundries)	5139	209	1
WORKPLACES (Other than Outworkers' premises in- cluded in part 3 of this Report)	210	14	—
TOTAL	5689	294	1

II.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts—</i>				
Want of cleanliness	275	275	...	...
Want of ventilation	47	47	...	...
Overcrowding	4	4	...	...
Want of drainage of floors	9	9	...	...
Other nuisances	605	608	...	...
* Sanitary accommodation {	insufficient	46	46	...
	unsuitable or defective	206	194	1
	not separate for sexes	31	29	...
<i>Offences under the Factory and Workshop Act—</i>				
Illegal occupation of underground bake-house (S. 101)... .. .	1	1	...	...
Breach of special sanitary requirements for bakehouses (SS. 97 to 100) ...	150	150	...	...
Other offences (Excluding offences relating to out-work which are included in part 3 of this Report).	...	...	...	...
TOTAL	1374	1363	...	1

* Sec. 22 of the Public Health Acts Amendment Act, 1890, adopted.

III.—HOMEWORK.

OUTWORKERS' LIST, SECTION 107.										
NATURE OF WORK.	List received from Employers.						Notices served on Occupiers as to keeping or sending lists.	Prosecutions.		
	Sending twice in the year.		Sending once in the year.		Failing to keep or permit inspection of lists.	Failing to send lists.				
	Lists.	Outworkers.		Lists.			Outworkers.			
		Con-tractors.	Work-men.				Con-tractors.	Work-men.		
WEARING APPAREL—										
(1) Making, &c. ...	282	267	471	21	4	30	199	...	4	
(2) Cleaning and Washing ...	...	8	...	...	...	...	...	...	...	
Household Linen ...	...	...	5	...	...	...	...	...	...	
Curtains and Furniture Hangings ...	...	...	...	...	...	...	...	...	...	
Furniture and Upholstery ...	16	86	33	1	...	1	18	...	...	
Electro Plate ...	...	4	...	...	...	...	2	...	...	
Locks, Latches and Keys ...	2	10	...	1	1	1	...	...	...	
Umbrellas, &c. ...	8	12	10	...	...	...	4	...	...	
Textile weaving ...	...	...	...	31	26	59	29	...	...	
TOTAL ...	308	387	519	54	31	91	252	...	4	

IV.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.		Number.
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	Workshops	2365
	„ Bakehouses	478
	Total number of workshops on Register ...	2843

V.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Acts (S. 133, 1901)	86
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Acts (S. 5, 1901)	72
Notified by H.M. Inspector	110
Reports (of action taken) sent to H.M. Inspector	
Other	7
Underground Bakehouses (S. 101) :—	
In use at the end of the year	42

(B) SHOPS ACTS, 1912 and 1913.

Shops Inspected. The number of visits and investigations made to shops where young persons are employed was 2,693. In 163 shops the employers had failed to exhibit the notice referring to the provisions of the Act, and stating the number of hours during which young persons may be employed. Two of these who had previously been cautioned were prosecuted, the remainder were cautioned. Eleven young persons were found employed in shops after having been previously on the

same day employed in a Factory or Workshop for the full number of hours permitted by the Factory and Workshop Act. In two cases the employers were prosecuted, and the remainder warned that a repetition of the offence would involve prosecution.

Special visits were made to 361 shops where female assistants are employed, and enquiries made as to compliance with the provisions of the Shops Act. With two exceptions it was found that the seats were provided as required by the Act, and upon the attention of the proprietor of the shop being drawn to the offence the necessary seats were immediately provided.

A large number of day and night observations have been made to shops to see if the provisions relating to the weekly half holiday were carried out. In forty-eight cases it was found that no notice had been fixed specifying the day chosen by the shopkeeper for the closing of the shop on the weekly half holiday. Two hundred and forty-seven shops were found open, and the occupier not displaying the mixed trades notices specifying the exempted trade for which they were remaining open after the hour of closing on the weekly half holiday. All these persons were warned that a repetition of the offence would involve them in legal proceedings. One hundred and fifty shops were found open and the occupiers selling non-exempted articles. In four cases proceedings were taken against the offenders, and the remainder were warned.

Fifty-eight hawkers were found selling goods in the street after the hour of closing on the day fixed for the weekly half holiday. In seventeen cases where the offence was repeated after warnings had been given the offenders were prosecuted.

Assistants' Weekly Half Holiday. In 232 cases it was found that the employer had failed to provide the prescribed form relating to their assistants' weekly half holiday, but upon this being pointed out to the persons concerned the form was in each case immediately provided.

It was also found that in twenty-one cases shop assistants were employed on the day fixed for their weekly half holiday after the hour of 1.30 p.m. In three cases proceedings in the City Court were instituted, and the responsible persons fined.

Interval for Meals. Eighteen cases were found where assistants were not having the correct intervals for meals as prescribed by the Act. As these were first offenders the employers were warned to arrange for their assistants to have the correct intervals, and upon this being done no further action was taken.

Butchers' and Hairdressers' Closing Order. Visits have been specially made by day and night after closing hours to butchers' and hairdressers' shops in connection with their respective Closing Orders. Numerous observations were made of these shops, and two were found open in contravention of the Orders. Eighteen were also found not displaying their official copies of the Closing Order. As these were all first offenders they were cautioned.

Jewellers' (Central Area) Closing Order. During the month of November a petition was received from the Jewellers in the Central area of the City asking the Council to make a Closing Order for this particular trade to be closed on Monday, Tuesday, Thursday, and Friday at 7.30 p.m., Wednesday the weekly half holiday at 1 p.m., and on Saturday at 10 p.m. The Inspector verified the signatures, and ascertained that the two-thirds majority as required by the Act had been obtained, with the result that the Order has since been made by the Council, and now awaits the confirmation of the Secretary of State.

Fireworks Exemption Order. A petition signed by the necessary majority of fireworks' retailers was presented to your Committee, asking for that particular trade to be exempt from the provisions of the Shops

Act relating to the closing of their shops on a weekly half holiday. Upon the petitioners' signatures being verified, it was found the necessary majority had been obtained, the exemption applied for was therefore granted.

Bakers' and Confectioners' Order. The Order made by the City Council at their meeting in October, 1913, for the closing of bakers' and confectioners' shops on Wednesday at 2 p.m. for the weekly half holiday, after much opposition, was confirmed by the Secretary of State in June.

Prosecutions. The following summary shows that twenty-eight prosecutions were undertaken under the Shops Act, 1912, and fines amounting to £4 17s. 6d. and £6 19s. costs were imposed.

Nature of Offence.	No. of Cases.	Penalties.			Costs.		
		£	s.	d.	£	s.	d.
Failing to allow assistants weekly half holiday	3	0	9	0	1	1	0
Employing young person after factory	2	0	14	0	1	6	0
Failing to affix abstract relating to young persons	2	0	12	0	1	1	0
Failing to observe weekly half holiday	4	0	10	0	0	6	0
Hawking on weekly half holiday	17	2	12	6	3	5	0

(C) THE RAG FLOCK ACT, 1911.

During the year the Shops Inspector has obtained and submitted to the City Analyst for analysis forty samples of flock. Three of the samples were found not to conform to the standard prescribed by the Local Government Board Regulations, and proceedings were instituted in these three cases, particulars of which are given below.

Sample No. 87.—Sample of flock used for making bedding, contained 44 parts of Soluble Chlorine as Chlorides per 100,000. The case was dismissed on account of a technical point raised by the defence as to the wording of the summons.

Sample No. 95.—Flock used for making bedding, contained 49·64 parts of Soluble Chlorine as Chlorides per 100,000. The owner was fined 20s. and 17s. 6d. costs.

Sample No. 98.—Flock known as “ Common darks ” and used for making bedding, contained 49 parts of Soluble Chlorine as Chlorides per 100,000. The defendant was fined 20s. including costs.

(D) FABRICS (MISDESCRIPTION) ACT, 1913.

During the year the Shops Inspector was appointed to carry out the provisions of this Act, which has for its object the prohibition of the sale of a Textile Fabric with a misleading description as to its non-inflammability, or safety from fire. Thirteen samples were obtained and submitted to the Conditioning House to be tested as to their non-inflammability. Ten of the samples were found not to conform to the standard prescribed by the Regulations issued under the Act by the Secretary of State, and proceedings were instituted in five cases, with the result that the responsible persons were fined penalties of £3 5s. and £1 1s. being imposed.

X.—CLOSET ACCOMMODATION.

During the year 3,264 privies and middens were converted into water closets, and middens in connection with the privies were replaced by ashes pits or dust bins.

Owing to the outbreak of the war this was a decrease of 974 compared with the previous year.

A comparative table follows and shows at a glance the progress made in " conversions " since 1907. There is also a table giving the number and types of closets in use in dwelling-houses ; in premises under the operation of the Factory and Workshop Acts ; in Schools ; and in Public Institutions.

COMPARATIVE TABLE SHOWING THE PROGRESS MADE IN THE CONVERSION
OF PRIVIES INTO WATER CLOSETS.

Year.	Dwelling-houses.		Factories and Workshops.		Other Premises.		Totals.	
	W.C.'s.	Privies.	W.C.'s.	Privies.	W.C.'s.	Privies.	W.C.'s.	Privies.
1908	1854	25	254	2	78	5	2186	32
1909	1969	12	194	2	28	1	2191	15
1910	1945	18	217	2	—	—	2162	20
1911	2128	8	202	—	35	2	2365	10
1912	2917	9	196	—	95	—	3208	9
1913	3990	1	160	—	88	—	4238	1
1914	3123	1	127	—	14	—	3264	1

SANITARY ACCOMMODATION AT THE END OF 1914.

(i.) Dwelling Houses.

	No. of Houses	Water Closets	Waste Water Closets	Privies
WATER CLOSETS.				
More than one sanitary convenience to each house ..	4957	7860	568	1807
One to each House	30850	30850	—	—
Less than one to each house	15233	8094	—	—
WASTE WATER CLOSETS.				
One to each house	7297	—	7297	—
Less than one to each house ..	250	—	126	—
PRIVIES.				
One to each house	7707	—	—	7707
Less than one to each house	8504	—	—	3971
Totals	74798	46804	7991	13485

SUMMARY.

	Number	Percentage
Houses with water closets	51040	68
Houses with waste water closets	7547	10
Houses with privies only	16211	22

(ii.) Business and Other Premises.

	No. of Premises	Water Closets	Waste Water Closets	Privies
Factories, workshops, and other business premises ..	4150	9868	—	420
Places of worship, schools, public institutions, &c. ..	446	2838	—	278
Total	4596	12706	—	698

(iii.) Totals.

Number of water closets	59,510
„ waste water closets	7,991
„ privies	14,183
	———— 81,684

Number of middens	9,117
„ dry ashpits	29,477
„ dust bins	6,815
	———— 45,409

It will be noticed that 15,233 houses with water closets and 8,540 houses with privies have less than one sanitary convenience to each house. It therefore happens that more than in a quarter of the houses in Bradford the standard of sufficiency of sanitary accommodation is very low.

Eight hundred and sixty-eight plans have been approved by the Committee for the construction of the following work :—

3,079 water closets affecting 3,696 dwelling-houses.

1 privy	„	1	„
443 dust bins	„	440	„
28 baths	„	28	„
29 water closets	„	19	licensed premises.
10 urinals	„	10	„
156 water closets	„	90	factories and workshops.
19 water closets	„	11	schools, clubs, &c.
5 urinals	„	5	„ „
7 manure pits	„	7	stables.

Nine hundred and one notices have been served under the Bradford Improvement Act 1873, Section 21, and the Public Health Act 1875, Section 36, for the provision of water closets at 3,619 houses, as against 1,290 notices affecting 4,987 houses last year.

Under the provisions of the P.H.A.A. Act, 1890, 88 statutory notices were served affecting 98 factories and workshops.

For failing to comply with the requirements of notices served upon them to reconstruct or to convert privies into water closets, Magisterial proceedings were taken in fifteen cases.

In eleven instances the summonses were withdrawn on payment of costs, amounting altogether to 32s., the offenders in the meantime having done the necessary work.

In the remaining four instances the cases were adjourned over the year end to give time for the completion of the work then in progress.

There are a large number of privies in use in the isolated parts of the City where there is an absence of both water mains and suitable public sewers, and although it is very probable that water mains may be laid in portions of the districts in the near future, the probability of the provision of public sewers is rather remote. Water closets therefore cannot be provided unless septic tanks and filter beds are constructed, which are very difficult to secure.

At the present time a great number of privies in these districts are in a dilapidated and tumbled-down condition, and the structures need re-building. The steps to be taken for the provision of more satisfactory sanitary accommodation in these cases forms a very difficult problem for which neither the reconstruction of the privy nor the substitution of the tub system is a satisfactory solution.

The dust bins at present in use in Bradford are by no means of the best construction from a sanitary point of view as many are not provided with a tightly-fitting cover, and in common yards have no fixed place, while very few are raised from the surface of the ground. These are now principles which should be adopted in any regulation of dustbins.

Public Urinals and Underground Lavatories. The number of public urinals within the City, exclusive of the underground conveniences, is 66.

Three new urinals of salt glazed stoneware with water flush have been erected at the junction of Gaythorne Road and Round Street ; the junction of Huddersfield Road and Common Road, Low Moor ; and at White Abbey Road. The urinals have been remodelled and salt glazed stalls with constant water flush provided at the bottom of Lister-hills Road ; adjoining the G.N.R. Co.'s Goods Dépôt, Wakefield Road ; Shearbridge Road ; and at Great Horton Road, opposite the end of

Horton Park Avenue. A constant water flush has been installed at the urinal adjoining the Lemon Tree Inn, Leeds Road. The urinal at Four Lane Ends has been removed to a site on the opposite side of the roadway, the original site being required for building purposes.

A gas stove has been fixed at Rawson Square, and has answered its purpose admirably in reducing the humidity of the air at this lavatory, which at times, especially during the winter months, was a constant source of trouble. A new ten-light dry gas meter has replaced the old one at Town Hall Square underground lavatory, the latter being worn out. All the underground conveniences are kept in a very satisfactory condition, and repairs are immediately effected when necessary.

XI.—GENERAL NUISANCE WORK.

(A) DRAINAGE.

The number of tests of house drains done by the Inspectors was 3,370; they were carried out in the following manner:—

NATURE OF TEST.	No. of Tests.	RESULT.	
		Positive.	Negative.
Volatile	1535	424	1111
Coloured water	1462	165	1297
Smoke (Rocket)	339	88	251
Smoke (Machine)	23	8	15
Hydraulic	11	3	8
Totals	3370	688	2682

Included in the above figures are 547 tests made to the drains of houses where Infectious Disease occurred. Particulars of these are as follows :—

DISEASE.	No. of Tests.	DEFECTIVE.		NOT DEFECTIVE.	
		No.	Percentage	No.	Percentage.
Diphtheria	277	57	20·4	220	79·6
Enteric Fever ..	68	13	19·1	55	80·9
Erysipelas	188	39	20·7	149	79·3
Other diseases ..	15	1	6·7	14	93·3

In forty-seven cases the system of drainage was such as to render impracticable the application of a test.

The very small number of water or hydraulic tests carried out last year is noticeable. There can be no doubt but that this is the most efficient test to apply to house drains, but it is not applicable to old drains. It should, however, be applied in all cases of new or reconstructed drains, and a serious effort should be made to bring about its more general use. Where this test has been adopted elsewhere it has been found that a much greater proportion of defective work is discovered but contractors soon get accustomed to doing work which will stand this test.

During the year the drainage of 53 blocks of property comprising 260 houses were dealt with under Section 41 of the Public Health Act, 1875, as against 257 houses in 1913, 453 houses in 1912, 349 in 1911, and 167 in 1910.

In 1914 rain water down spouts were disconnected from the drains or sewers in 967 cases. Accounts have been received and passed for the disconnection of 235 down spouts at 262 houses. The total cost of the work involved was £264 7s., or an average of 22s. 5d. approximately for each down spout. The total amount payable by the Corporation was £124 19s. 5d.

(B) OFFENSIVE TRADES.

Under the Public Health Acts, 1875 to 1907, bye-laws were confirmed by the Local Government Board in 1914 regulating the following offensive trades in the City :—Blood boiler, blood dryer, and trades connected with blood and other putrescible animal matter ; bone boiler, tripe boiler, tallow melter, fat melter, or fat extractor, size maker or manufacturer, fellmonger, oil distiller and refiner, gut scraper, fish frier, artificial manure manufacturer, hide and skin dealer, and rabbit skin dryer.

During the year consent was given to the establishment of two businesses as fellmongers, and one business as a gut scraper. Reference might be made to pages 150-151 respecting the manner in which fish frying is carried on in the city.

(C) SMOKE PREVENTION.

In Bradford there is one smoke Inspector employed whole time in the work in which he is also assisted by the district sanitary Inspectors. Action is chiefly taken under the special powers acquired in the Local Acts of 1910 and 1913.

The number of notices served for the abatement of smoke nuisance during the year was thirteen, nine of these were served by the Inspector specially appointed, and the remaining four by the District Inspectors. The notices were served under the provisions of the Bradford Corporation Act, 1910, Section 53.

The proceedings taken subsequent to the service of these notices were as follows :—

In eight cases Police Court proceedings were instituted, and in four instances fines and costs were imposed amounting to £21 1s. In the remaining four cases the Summonses were withdrawn on payment of costs amounting to £10 13s.

Three cases were not proceeded with after being referred to the Town Clerk, and in two cases a letter of warning was sent to the offender.

The following table shows the number of notices served and prosecutions undertaken during the past seven years.

SMOKE PREVENTION. NOTICES AND PROSECUTIONS. 1908-1914.

Year.	Notices served.	Prosecutions.	Cases dismissed.	Withdrawn.	Fines.			Costs.			Total.		
					£	s.	d.	£	s.	d.	£	s.	d.
1908	68	38	—	1	10	18	6	15	5	0	26	3	6
1909	81	29	—	4	8	0	0	11	0	0	19	0	0
1910	67	22	—	4	7	10	0	6	18	0	14	8	0
1911	44	18	—	2	6	4	0	5	18	0	12	2	0
1912	83	23	6	1	40	0	0	31	5	0	71	5	0
1913	15	3	—	1	5	0	0	3	3	0	8	3	0
1914	13	8	—	4	20	0	0	11	14	0	31	14	0

About 3,000 unrecorded observations have been made by the Smoke Inspector during the year, and 229 have been made by the District Inspectors.

There still continues to be a considerable improvement in the smoky condition of the atmosphere due to industrial chimneys, and manufacturers appear to be increasingly alive to the advantages derived from the complete combustion of boiler fuel.

(D) SANITARY INSPECTORS' WORK.

The following summary is supplied by the Inspector of Nuisances as to the work performed by the sanitary inspectors during the year.

Total number of Inspections	126,225
Total number of Nuisances reported ..	13,211

PARTICULARS OF WORK DONE, 1910-1914.

	Number of Cases.				
	1910	1911	1912	1913	1914
<i>Drainage and Sanitary Arrangements—</i>					
Choked drains cleansed	1456	1834	1634	1364	1543
Drains amended	1175	1184	887	839	792
Drains reconstructed	476	1231	1710	1544	1278
Extra drains provided	115	375	492	288	453
Ccellars drained	13	74	78	47	54
Drains underneath houses abolished	67	129	53	27	52
Drainage systems interecepted from sewers	38	72	40	9	18
Open drain inlets trapped.. .. .	69	137	108	96	19
Waste pipes disconnected.. .. .	127	226	91	121	107
Waste pipes trapped	—	—	—	—	84
Rain water pipes disconnected ..	247	909	859	865	916
Rain water conductors repaired or renewed	3319	3104	2465	2501	2400
House sinks repaired or renewed..	82	91	115	77	109
New house sinks provided.. .. .	7	150	122	83	81
Water closet pedestals renewed ..	144	208	252	182	158
Water closets and flushing apparatus repaired	399	459	584	405	408
Water closets cleansed	177	273	267	214	142
Water closet apartments cleansed and limewashed	208	569	493	591	607
Water closet apartments properly lighted and ventilated.. .. .	—	—	—	—	3

				Number of Cases.				
				1910	1911	1912	1913	1914
Soil pipes repaired or renewed ..	..	..	..	66	136	107	128	80
Indoor soil pipes abolished..	..	..	..	8	15	11	7	2
Urinals cleansed, amended, or screened	..	..	..	40	97	24	28	42
Urinals re-modelled..	..	..	..	13	7	14	6	14
New urinals provided	..	..	..	7	12	2	2	2
<i>Privies and Ashpits—</i>								
Privy structures abolished..	..	..	..	—	—	—	—	110
Deposit of slops in ashpits prohibited	..	..	..	110	105	165	195	147
General repairs executed	..	..	..	1028	1294	1046	985	1016
Privy apartments cleansed and limewashed	..	..	..	218	651	373	245	86
Dust bins repaired or renewed ..	..	..	..	93	90	229	161	175
<i>Dwelling Houses, Etc.—</i>								
Dampness excluded..	..	..	..	135	340	279	180	167
Roofs repaired	..	..	..	368	670	464	423	357
General repairs executed	..	..	..	475	686	631	423	404
Houses or parts cleansed and limewashed	..	..	..	350	462	334	230	230
Ventilation improved	..	..	..	—	50	44	226	23
Overcrowding abated	..	..	..	14	25	26	33	61
Cellar areas cleansed	..	..	..	70	81	29	38	62
Caravans removed	..	..	..	51	46	85	27	97
<i>Courts, Back Yards, and Stable Yards—</i>								
Paving repaired in yards and passages	..	..	..	278	387	335	243	286
Yards and passages newly paved ..	..	..	..	—	37	34	28	18
Yards cleansed	..	..	..	171	318	174	311	181
Passages cleansed and limewashed	..	..	..	137	382	260	371	363
<i>Keeping of Animals, &c.—</i>								
Improper keeping of swine prohibited	..	..	..	17	37	24	5	8
Improper keeping of fowls, &c., prohibited	..	..	..	125	92	52	47	55
Accumulations of offensive matter removed..	..	..	..	164	284	197	320	227
Accumulations of manure removed	..	..	..	271	262	247	177	156
Manure pits repaired	..	..	..	30	21	7	23	13
Manure pits provided	..	..	..	16	14	3	5	3

		Number of Cases.				
		1910	1911	1912	1913	1914
<i>Miscellaneous Nuisances—</i>						
Dangerous places made secure	..	—	77	223	192	171
Effluvium nuisances abated	..	—	—	—	—	12
Other unclassified nuisances abated		72	119	60	27	11
<i>Special Inspections—</i>						
Graveyards		603	489	308	324	300
Offensive trade premises		646	811	541	419	519
Schools inspected		—	—	—	—	1104
Zymotic diseases investigated and subsequent visits		3101	3003	4201	2795	2154
Complaints specially investigated..		1308	1400	1148	1226	1341

The number of statutory notices served for the abatement of nuisances was 4,591, as against 4,647 last year.

The number of preliminary notices served for dangerous places to be made secure was 43, as against 68 last year.

In default of compliance with the requirements of notices served, ten cases were heard before the City Magistrates. Eight of these were withdrawn on payment of 3s. costs in each case, the work having been completed satisfactorily. In the remaining two cases an Order was made for the necessary works to be executed within seven days. In one case the Order was obeyed within the time specified. In the other case the Defendant was prosecuted for failing to comply with the Order, and was fined 5s. together with 7s. costs.

Dangerous and Unfenced Places. The number of dangerous and unfenced places dealt with under the direction and supervision of the Inspectors of this Department was 171, as against 222 last year.

Reports by Women Inspectors. During 1914 the female inspectors reported 355 nuisances which were all dealt with. They were as follows :—

Nature of defects.	Number of Cases.				
	1910	1911	1912	1913	1914
Damp houses	43	49	46	52	34
House roofs, walls, and ceilings defective	62	77	55	37	43
House windows defective	19	8	—	16	21
Cellars containing water	3	3	7	4	5
Structural dilapidations	65	18	21	19	5
Bad smells	27	22	7	7	13
Choked or defective drains	44	36	36	42	32
Chimney flues defective	14	11	7	6	2
Dangerous places	5	11	7	5	3
Rain water conductors defective ..	9	4	2	8	9
Defective w.c. pedestals and fittings ..	14	15	19	35	45
Defective water supply fittings ..	15	1	1	1	9
Choked water closets	19	9	8	22	38
Want of repairs to privies and ashpits..	56	42	29	38	58
Privies requiring conversion to w.c.'s..	—	13	5	11	4
Filthy privies and water closets ..	—	3	6	1	2
Defective yard flagging	—	1	—	1	14
Foul accumulations	1	1	2	1	5
Miscellaneous defects	6	7	8	8	13

References to Other Departments. The following matters were referred to other departments for remedy :—

Dangerous places	157
Foul and defective sewers and sewer vents ..	43
Gullies requiring breaking down to	2
Defective pavements and flagging in public streets	70
Buildings erected in back yards	6
Foul and defective water courses	10
Waste of water	517
Choked street gullies	1373

Additional Duties. During the year the sanitary staff undertook a weekly inspection of all the military billets in the city and by this co-operation with the military authority the staff materially helped in maintaining good sanitary conditions in the city. The cleansing and scavenging off these billets was undertaken by the Cleansing Committee.

Monthly inspections of the sanitary arrangements of both the Provided and Non-provided schools were carried out in 1914 by the sanitary staff, and where defects were found they were reported to the Director of Education who had the matters attended to.

XII.—LODGING HOUSES AND CANAL BOATS.

(A) COMMON LODGING HOUSES.

At the end of the year there were thirty-four registered Common Lodging Houses in the City, comprising 187 sleeping rooms, and affording accommodation for 1,594 men, 157 women, and 23 couples, or a total of 1,797 persons.

Statistics have been prepared from the returns sent in by the keepers of these houses, showing the proportion of single men and women, and also the number of couples frequenting these houses for the six months ending December 31st. The figures are given hereunder :—

ADULTS.		8 to 21 years.		Under 8 years.		Couples.
Males.	Females.	Males.	Females.	Males.	Females.	
208805	22585	—	687	321	899	3320

The total number of lodgers of all sexes for the year amounted to 517,908, this being a decrease of 57,581 compared with the corresponding figures for the previous year, which may be accounted for chiefly owing to the War.

Two Common Lodging Houses have been voluntarily closed, and one new house has been established. Three transfers of the registry of the keepers have been effected during the year.

The whole of these premises have been cleansed and limewashed in accordance with the requirements of the Public Health Act, 1875, Section 82, and are kept under constant supervision and inspection by the Common Lodging House Inspector.

(B) HOUSES LET IN LODGINGS.

The following table shows the progress made in the elimination of these houses in the various districts during the past four years.

HOUSES LET IN LODGINGS IN CERTAIN DISTRICTS AT END OF EACH YEAR. 1911-1914.

Year	District				Total
	Bolton Road	George Street	Manchester Road	Westgate	
1911	36	98	25	38	197
1912	9	58	26	55	128
1913	—	4	6	18	28
1914	—	4	6	17	27

From the above table it will be seen that with the exception of the abolition of one house in the Westgate District no change has taken place in the number of these houses from those figures quoted during the preceding year. Proceedings, however, were commenced in the last month of the year under review for the abolition of most of the houses enumerated in the above table, and it is anticipated that at the close of the year a substantial reduction of this type of dwelling-house will be recorded.

(C) CANAL BOATS.

The number of boats inspected within the City boundaries was 429. On thirty of these boats contraventions of the Canal Boats Acts and Regulations were found to exist.

Masters without certificate	..	..	..	7
Certificates not identifying owners with boats	..			1
Boats not properly marked	..	..	..	3
Cabins overcrowded	..	..	..	2
Cabins not in a cleanly condition	..	..	..	2
Cabins requiring painting out	..	..	..	4
Cabins out of repair	..	..	..	20
Without proper water vessels	..	..	..	3
Total				42

Notices were served upon the responsible persons requiring them to execute the necessary repairs, and in twenty-five cases the notice was complied with. In the remaining five cases we were notified that the boats had been taken out of commission, and that the necessary repairs would be executed before the boats were again put into commission.

XIII.—MISCELLANEOUS.

(A) AMBULANCE WORK AND DISINFECTION.

The ambulance station for cases of Infectious Disease is situated at Leeds Road Hospital. At the end of the year there were two horse ambulances, two horses, and two drivers employed in the work. The number of patients removed in 1914 by the ambulances was 726.

Bradford has a well-equipped disinfecting station at Canal Road, with two motor vans for the removal of clothing and bedding; the number of articles disinfected there during the year was 15,758. The number of houses disinfected for infectious disease by the health staff was 1,050, while in a small number of cases disinfection was carried out at the request of manufacturers, property owners, and others, for which a small charge was made, the total amounts received being £7 18s. 1d.

The articles disinfected at the disinfecting station comprised the following :—

Aprons 44	Dressing gowns .. 27	Pillows 1599
Beds 871	Dress skirts .. 55	Pyjamas 8
Bodices 24	Eiderdowns .. 145	Rugs 124
Bolsters 758	Frocks 66	Sheets 658
Blankets .. 5115	Great coats .. 15	Shawls 246
Blouses 26	Handkerchiefs .. 127	Sundries .. 1369
Carpets 35	Hose 240	Towels 89
Coats 537	Jackets (Ladies') 120	Trousers .. 300
Counterpanes .. 1083	Mattresses .. 267	Underskirts .. 78
Combinations .. 68	Nightdresses .. 178	Vests 119
Cushions .. 191	Overlays .. 224	Waistcoats .. 71
Drawers 63	Petticoats .. 42	

(B) PUBLIC MORTUARY AND DISTRICT GROUNDS.

The new mortuary in Wilton Street was opened October 11th, 1910. During the past year 82 bodies have been deposited and 30 post mortem examinations made.

Three hundred visits have been made to the various grave yards in the City by the District Inspectors, as against 324 for the previous year. No irregularities were observed.

(C) CREMATORIUM.

The remains of 18 persons were cremated during 1914 at the Scholemoor Crematorium, in comparison with 15 during the previous year.

The following table, prepared by the Cremation Society of Great Britain, shows the number of Cremations carried out in Great Britain since the year 1885.

Table of Cremations carried out in Great Britain since the year 1885.

	1885-91.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	Total.
Woking ...	253	104	101	125	150	137	173	240	240	301	273	275	143	138	95	140	108	119	105	106	114	125	128	124	3817
Manchester ...	...	3	30	47	58	52	51	62	88	83	96	81	92	98	97	90	98	116	106	114	124	149	172	184	2091
Glasgow ...	...	...	...	...	1	10	16	12	16	20	18	20	24	19	35	44	30	28	30	28	39	44	49	57	540
*Liverpool	...	...	...	...	...	2	10	27	23	40	40	54	35	40	35	46	34	32	46	37	50	52	66	48	717
*Hull...	...	...	...	...	...	...	...	...	...	...	17	13	18	20	15	17	29	37	15	21	25	27	23	16	293
Darlington	...	...	...	...	...	...	...	...	...	...	1	2	1	7	4	13	8	6	9	9	12	15	11	11	109
Golder's Green...	...	...	...	...	...	...	...	...	...	...	...	5	158	220	252	298	290	364	421	415	542	591	602	671	4829
*Leicester...	...	...	...	...	...	...	...	...	...	...	...	1	5	8	16	12	12	14	19	16	13	14	11	7	148
Birmingham	...	...	...	...	...	...	...	...	...	...	...	...	1	19	22	25	33	18	30	38	44	40	59	53	382
*Leeds	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16	15	16	24	19	12	17	24	16	28	187
*Ilford...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	23	18	19	24	22	20	32	21	42	230
*Bradford ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	14	13	6	13	14	13	9	15	18	116
*Sheffield ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	6	18	12	18	8	10	12	15	20	126
Total ...	253	107	131	172	209	201	250	341	367	444	445	451	477	567	604	743	707	795	855	840	1023	1134	1188	1279	13,585

*Municipally controlled.

XIV.—STAFF.

The Staff employed by the City Council as a Health and Education Authority, in public health and medical work, is as follows :—

- 1 Medical Officer of Health.
- 1 Bacteriologist.
- 1 Public Analyst.
- 1 Veterinary Inspector.
- 1 Chief Inspector of Nuisances.
- 1 Assistant Inspector of Nuisances.
- 2 Meat Inspectors.
- 1 Fish Inspector.
- 1 Food and Drugs Inspector.
- 2 Inspectors under the Workshops and Shop Hours Acts.
- 1 Smoke Inspector.
- 1 Cowsheds Inspector.
- 1 Lodging House Inspector.
- 2 Inspectors under the Housing, Town Planning, etc., Act 1909.
- 13 District Inspectors ; 3 Disinfecting Officers ; 3 Ambulance Drivers ; 1 Storekeeper.
- 1 Chief Woman Inspector.
- 9 Health Visitors.
- 10 Clerks.

Hospital Staff—

- 1 Medical Superintendent.
- 1 Eye and Ear Surgeon.
- 2 Resident Physicians.

Tuberculosis Dispensary—

- 2 Medical Officers ; 4 Nurses ; and 1 Clerk Dispenser.

Infant Consultations—

- 3 Medical Officers.
- 11 Nurses.
- 1 Dispenser ; and 1 Clerk.

School Medical Staff—

- 4 Medical Officers.
- 2 Dentists.
- 8 Nurses.
- 2 Supervisors of Physical Exercises ; and 4 Clerks.

Milk Depot—

- 1 Manageress ; 3 Clerks ; and Assistants.

Considerable difficulty was found in maintaining the staff consequent on the outbreak of the War, and on many members of both the medical and inspectorial staff much increased work has fallen as a result. The tuberculosis staff has particularly suffered in this respect, but it is gratifying to be able to record that they have been able to cope satisfactorily with the increased pressure of work. The following among other members of the staff are at present serving with the forces :—
 Dr. D. Henderson Weir, Dr. J. W. Gray, Dr. Catherine Fraser, B Cathpole, F. T. Kenyon, P. Day, S. S. White, H. K. Whalley, and L. J. Bentley.

APPENDIX.

TABLES REQUIRED BY THE LOCAL GOVERNMENT BOARD.

TABLE I.
VITAL STATISTICS OF WHOLE DISTRICT DURING 1914 AND PREVIOUS YEARS.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Numbers	NETT.		Number.	Rate.	of Non-residents registered in the District.	of Residents not registered in the District.	Under 1 Year of Age.		At all Ages.	
			Number.	Rate.					Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1909	293,983	5507	...	18.73	4208	14.31	66	68	637	116	4210	14.32
1910	295,865	5490	...	18.56	4102	13.86	63	77	695	127	4116	13.91
1911	288,723	5480	5486	19.00	4269	14.79	71	153	765	140	4351	15.07
1912	289,618	5586	5603	19.35	4104	14.17	75	173	553	99	4202	14.51
1913	290,540	5808	5811	19.62	4372	14.76	91	193	741	128	4474	15.11
1914	290,642	5702	5709	19.64	4490	15.45	106	196	693	122	4580	15.76

TABLE I.—*continued.*

NOTES.—This Table is arranged to show the gross births and deaths in the district, and the births and deaths properly belonging to it with the corresponding rates. For years before 1911 some of the corrected rates probably will not be available. The rates should be calculated per 1,000 of the estimated gross population. In a district in which large Public Institutions for the sick or infirm seriously affect the statistics, the rates in Columns 5 and 13 may be calculated on a nett population, obtained by deducting from the estimated gross population the average number of inmates not belonging to the district in such institutions.

* In Column 6 are to be included the whole of the deaths registered during the year as having actually occurred within the district.

In Column 12 is to be entered the number in Column 6, corrected by subtraction of the number in Column 8 and by addition of the number in Column 9. Deaths in Column 10 are to be similarly corrected by subtraction of the deaths under 1, included in the number given in Column 8, and by addition of the deaths under 1 included in the number given in Column 9.

Area of District in acres (exclusive of area covered by water)	..	...	..	22,841	Total population at all ages	...	...	...	288,458	At Census of 1911.
					Number of inhabited houses	...	...	...	71,504	
					Average number of persons per house	...	...	...	4.03	

TABLE II.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1914.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH LOCALITY.																TOTAL CASES REMOVED TO HOSPITAL.						
	At all Ages.	At Ages—Years.						North.	South.	East.	West.	Listerhills.	Great Horton.	Little Horton.	East Bowling.	West Bowling.	Exchange.	Bradford Moor.	Manningham.	Bolton.	Heaton.	Allerton.	Eccleshill.		Idle.	North Bierley East.	North Bierley West.	Thornton.	Tong.	
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	318	6	85	162	43	20	2	..	40	34	24	13	16	28	15	20	18	27	22	9	16	8	2	3	9	4	2	5	252	
Erysipelas	241	3	3	13	26	66	93	37	12	17	13	7	8	17	42	19	21	13	14	8	18	4	6	3	6	4	2	6	7	
Scarlet Fever	469	3	106	289	48	21	1	1	16	32	45	3	26	27	34	28	25	108	12	12	27	17	7	9	15	7	1	15	357	
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	80	...	6	16	14	34	10	...	3	4	9	1	10	3	5	5	10	3	7	1	3	1	3	...	5	2	1	2	51	
Continued Fever	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Puerperal Fever	21	...	...	...	4	17	...	...	1	2	5	1	1	...	2	2	...	2	2	...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	2	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Polymyelitis	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Oph. Neonatorum..	72	72	...	...	...	...	...	...	10	1	7	6	6	6	3	4	4	3	4	4	3	2	...	...	3	2	1	2	...	...
Pulmonary Tuberculosis	688	1	8	55	150	293	161	20	76	41	31	75	37	28	42	46	39	54	65	20	23	14	9	10	14	13	2	8	...	...
Other forms of Tuberculosis	208	11	48	66	44	28	7	4	16	18	11	15	9	12	13	20	13	21	14	4	6	4	9	3	3	3	5	5	...	...
Infective Enteritis...	284	78	77	20	18	48	29	14	24	20	4	8	19	117	30	10	8	6	3	2	5	2	...	...	...	...	...	...	...	...
Anthrax	11	...	...	...	2	7	2	...	...	...	...	5	...	...	3	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	2397	175	335	621	349	535	306	76	198	169	149	134	132	240	189	156	138	61	238	144	60	102	53	37	28	55	54	15	45	669

Isolation Hospital provided by the City Council, situate in the South Ward ; also one in Thornton provided by a Conjoint Board. Patients are also sent to the Calverley and North Bierley Conjoint Hospitals, situate outside the Borough. The Sanatorium provided by the City Council is situate in North Bierley East.

TABLE III.

CAUSES OF, AND AGES AT DEATH DURING THE YEAR 1914.

CAUSES OF DEATH.		NETT DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.									TOTAL DEATHS WHETHER OF "RESIDENTS" OR "NON-RESIDENTS IN INSTITUTIONS IN THE DISTRICT
		All ages.	Under 1.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and up- wards.	
All causes	Certified ...	4575	692	190	171	141	177	542	1327	1335	978
	Uncertified	5	1	...	...	1	...	1	1	1	...
Enteric fever ...		22	...	...	1	4	2	8	7	...	12
Smallpox ...		...	...	...	...	...	...	...	...	...	...
Measles ...		114	31	40	37	6	...	...	...	...	...
Scarlet fever ...		6	...	1	3	2	...	...	...	...	13
Whooping-cough ...		93	34	33	21	5	...	...	...	...	7
Diphtheria and croup		35	2	5	12	16	...	...	...	...	21
Influenza ...		34	2	1	2	1	...	2	9	17	25
Erysipelas ...		2	1	...	...	...	...	...	1	...	...
Phthisis (Pulmonary Tuberculosis) ...		371	...	1	4	11	77	147	114	17	1
Tuberculous Men- ingitis ...		45	5	11	13	14	2	...	...	...	119
Other tuberculous diseases ...		41	8	3	6	6	9	4	5	...	6
Cancer, malignant disease ...		368	...	1	1	3	...	35	186	142	11
Rheumatic fever ...		22	...	1	...	7	2	5	5	2	99
Meningitis ...		33	12	5	5	1	...	3	7	...	1
Organic Heart Dis- ease ...		448	2	...	1	8	18	58	186	175	9
Bronchitis ...		381	41	12	2	4	5	12	107	198	57
Pneumonia(all forms)		317	66	29	29	11	15	41	81	45	44
Other diseases of Res- piratory organs ...		59	5	2	4	...	...	8	23	17	58
Diarrhoea and En- teritis ...		133	77	9	6	1	...	7	18	15	11
Appendicitis and Typhlitis...		26	...	...	1	5	7	5	8	...	33
Cirrhosis of liver ...		29	...	...	...	1	...	5	21	2	20
Alcoholism ...		20	...	...	...	...	...	3	13	4	2
Nephritis and Bright's Disease...		156	...	3	1	2	6	21	89	34	4
Puerperal fever ...		10	...	...	...	...	2	8	...	...	25
Other accidents and Diseases of preg- nancy & parturition		12	...	...	...	...	1	11	...	...	4
Congenital debility and Malformation, including prema- ture birth ...		239	234	1	...	3	1	...	...	...	5
Violent deaths, ex- cluding Suicide ...		125	11	2	8	8	5	26	34	31	42
Suicides ...		39	...	...	...	...	2	13	21	3	54
Other defined dis- eases ...		1345	158	22	14	21	22	114	370	624	8
Diseases ill-defined or unknown ...		55	4	8	...	2	1	7	23	10	280
		4580	693	190	171	142	177	543	1328	1336	7
											978
Sub- Entries included above figures	14. Cere- bro-spinal Meningitis	...	...	...	...	...	...	...	...	...	...
	28. Polio- myelitis	2	...	...	1	...	...	...	1	...	...
	Anthrax	2	...	...	...	...	...	1	1	...	2

TABLE IV.

INFANT MORTALITY, 1914. NETT DEATHS FROM STATED CAUSES AT VARIOUS AGES UNDER 1 YEAR OF AGE.

CAUSES OF DEATH.		Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 1 month.	1-3 months.	3-6 months.	6-9 months.	9-12 months.	Total Deaths under 1 year.
All Causes.	Certified ...	156	34	41	22	253	125	113	109	90	691
	Uncertified ...	...	...	...	...	...	...	...	1	...	1
{	Small-pox ...	...	...	...	...	...	...	...	...	...	...
	Chicken-pox ...	...	...	...	...	...	...	...	...	...	...
	Measles ...	...	...	...	...	...	1	...	10	20	31
	Scarlet Fever ...	...	...	...	...	...	...	...	...	...	...
	Whooping Cough...	...	...	...	...	...	5	11	9	9	34
{	Diphtheria and Croup ...	...	...	...	...	...	...	1	...	1	2
	Erysipelas ...	...	...	...	...	...	1	...	...	...	1
{	Tuberculous Meningitis ...	...	...	...	...	...	...	1	2	2	5
	Abdominal Tuberculosis ...	...	...	...	...	...	1	1	1	1	4
	Other Tuberculous Diseases ...	...	...	...	...	...	...	1	1	2	4
	Meningitis (<i>not Tuberculous</i>) ...	...	...	1	...	1	4	1	5	1	12

TABLE V.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

Summary of Notifications during the period from 4th January, 1914, to the 2nd January, 1915.

AGE PERIODS.	NUMBER OF NOTIFICATIONS ON FORM A.												NUMBER OF NOTIFICATIONS ON FORM B.				NUMBER OF NOTIFICATIONS ON FORM C.		
	Primary Notifications.												Total Notifications (i.e., including cases previously notified by other doctors).		Total Notifications (i.e., including cases previously notified by other doctors).		Poor Law Institutions	Sana- toria	
	Primary Notifications.												Total	Total					
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards	Total							
Pulmonary																			
Males ..	1	5	9	17	36	35	84	86	68	47	13	401	450	—	4	2	6	164	29
Females ..	—	3	9	8	29	50	76	47	26	20	7	275	338	—	4	2	6	26	28
Non-pulmonary																			
Males ..	6	27	21	17	7	14	9	4	2	3	1	111	123	—	2	2	4	2	35
Females ..	5	21	9	12	12	11	10	5	1	1	3	90	100	—	—	3	3	2	36

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